4E-1

Department of Toxic Substances Control

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Arnold Schwarzenegger
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March 25, 2004

Mr. Mark Alling
West Coast General Manager
Phibro - Tech, Inc.
8851 Dice Road
Santa Fe Springs, California 90670

COMMENTS ON THE PHASE II SOIL VAPOR SURVEY AND SVE PILOT TEST WORK PLAN, BIOVENTING TREATABILITY STUDY WORK PLAN, FINAL SOIL VAPOR SURVEY WORK PLAN, AND FINAL PHASE I CORRECTIVE ACTION SOIL VAPOR SURVEY REPORT, PHIBRO-TECH, INCORPORATED, 8851 DICE ROAD, SANTA FE SPRINGS, CALIFORNIA 90670 (EPA ID NO. CAD008488025)

Dear Mr. Alling:

The Department of Toxic Substances Control (DTSC) has reviewed the following reports:

1. *"Phase II Soil Vapor Survey and SVE Pilot Test Work Plan"*, dated October 17, 2001
2. *"Bioventing Treatability Study Work Plan"*, dated February 16, 1998
3. *"Final Soil Vapor Survey Work Plan"*, dated February 16, 1998 and
4. *"Final Phase I Corrective Action Soil Vapor Survey Report"*, dated November 16, 2001.

Enclosed are comments on the above listed documents from Mr. Jose Marcos, Geological Services Unit and Mr. Laszlo Saska, P.E., Engineering Services Unit.

Please revise the subject document to address the attached comments and resubmit within 90 days of the date of this letter.

If you have any questions or need clarifications, please contact me at (714) 484-5380

Sincerely,

Kathy San Miguel

Kathy San Miguel
Hazardous Substances Engineer
Geology, Permitting and Corrective Action Branch

Attachments

cc: See next page

cc: Mr. Larry Bowerman, Chief
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Department of Toxic Substances Control

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Governor

MEMORANDUM

TO: Kathy San Miguel, P.E.
Hazardous Substances Engineer
Geology, Permitting and Corrective Action Branch

FROM: Jose Marcos
Engineering Geologist
Geological Services Unit

CONCUR: Laura Rainey, R.G.
Senior Engineering Geologist
Geological Services Unit

DATE: March 12, 2004

SUBJECT: PHIBRO-TECH, INC., SANTA FE SPRINGS, CALIFORNIA
FINAL SOIL VAPOR SURVEY WORK PLAN
FEBRUARY 16, 1998
(REVISED JANUARY 9, 2002)

PCA: 22120 SITE CODE: 300142 WP: 00 MPC: 19

As requested, the Geological Services Unit (GSU) of the Department of Toxic Substances Control (DTSC) reviewed the document entitled, *"Phibro-Tech, Inc., Santa Fe Springs, California, Final Soil Vapor Survey Work Plan"*, dated February 16, 1998 and revised January 9, 2002. The document was prepared by Camp Dresser & McKee Inc. for Phibro-Tech, Inc.

BACKGROUND

As required by the August 2, 1995 "*Hazardous Waste Facility Permit Modification*" for Phibro-Tech, Inc., a soil vapor survey workplan shall be submitted to DTSC to fully define the nature and extent of volatile organic compound (VOC) contamination in the vapor phase at the facility.

GSU reviewed and provided comments via a memorandum dated February 8, 2001 on "Soil Vapor Survey Workplan" dated February 16, 1998. DTSC transmitted the

memorandum to the facility and requested a revised workplan via a letter dated February 9, 2001. The workplan proposed to investigate a limited area located at the northwest portion of the facility. Samples were to be collected from depths of five and fifteen feet below ground surface (bgs). Samples were to be collected from a depth of twenty feet bgs from two locations and from other locations where the fifteen foot samples detected significant concentrations of VOCs. Additional sample locations were contingent on the results of the initial soil vapor sampling. The revised *"Final Soil Vapor Survey Work Plan"*, dated January 9, 2002 was submitted to DTSC after the soil vapor investigation had been conducted on March 3 and 4, 2001.

Results of the soil vapor investigation were reported in "Corrective Action Soil Vapor Survey Report" dated April 16, 2001. GSU reviewed the document and provided comments via a memorandum dated June 12, 2001. The revised document was re-submitted as "*Final Phase I Corrective Action Soil Vapor Survey Report*", dated November 16, 2001. Based on the results of the investigation, the report concluded that additional soil vapor sampling will be necessary to delineate the lateral and vertical extent of the VOC contamination.

The facility submitted "*Phase II Soil Vapor Survey and SVE Pilot Test Work Plan*", dated October 17, 2001, proposing to continue the investigation initiated in the previous soil vapor survey. This document is currently under review and comments will be forthcoming.

The following documents were also reviewed in conjunction with the January 9, 2002 "*Soil Vapor Survey Work Plan*":

- *"Final Phase I Corrective Action Soil Vapor Survey Report"*, November 16, 2001
- *"Phase II Soil Vapor Survey and SVE Pilot Test Work Plan"*, October 17, 2001

Based on the review of the above-mentioned documents, with emphasis on the "*Final Soil Vapor Survey Work Plan*", February 16, 1998, revised January 9, 2002, the following comments are noted:

GENERAL COMMENTS

1. Although the *"Final Soil Vapor Survey Work Plan"*, (Workplan) dated February 16, 1998, revised January 9, 2002 has already been implemented to conduct the investigation for *"Final Phase I Corrective Action Soil Vapor Survey Report"*, November 16, 2001, additional future soil vapor investigations still need to be completed to fully characterize the VOC contamination in the vadose zone at the northwest portion as well as other areas at the facility. The next proposed soil

vapor investigation is described in "*Phase II Soil Vapor Survey and SVE Pilot Test Work Plan*", October 17, 2001, which cites the Workplan as the primary soil vapor investigation reference.

Due to the foreseen additional future soil vapor investigations to be performed at the facility, GSU recommends that an updated generic soil vapor workplan be submitted to DTSC. The updated workplan will serve as the base soil vapor investigation workplan for future soil vapor investigations at the facility.

2. In addition to the *"Interim Guidance for Soil Gas Investigation"* prepared by the California Regional Water Quality Control Board – Los Angeles Region (LARWQCB), dated February 25, 1997, the more current *"Advisory – Soil Gas Investigations"* (Advisory) prepared by DTSC and LARWQCB, dated January 28, 2003, should be followed. Please ensure that the soil vapor workplan is in compliance with the guidelines set forth in the Advisory. The Advisory can be obtained from DTSC's website at www.dtsc.ca.gov.

   Furthermore, the updated Workplan should be in compliance with the requirements set forth in the 1995 "*Hazardous Waste Facility Permit Modification*".

SPECIFIC COMMENTS

1. Section 1.0, Introduction and Purpose, page 1

   The Soil Vapor Survey Work Plan states that "(DTSC) requires that a soil vapor survey be conducted within a designated halogenated volatile organic compound (VOC) investigation area...". Please note that the 1995 "*Hazardous Waste Facility Permit Modification*" section E.4.b page 52.a.4 clearly states that the designated VOC soil vapor investigation area is tentative and is not limited to the boundaries identified in Figure 2 of the 1995 document. The initial investigation area is intended to serve as a starting point in determining the full lateral and vertical extent of VOC contamination in the vadose zone.

2. Section 3.0, Sampling Methods, pages 4 to 10 and Section 5.0, Quality Assurance/Quality Control, pages 10 and 11

   Please clearly address GSU's General Comment 2 in these sections.

   Please update these sections to provide additional details regarding the step-by-step process in the installation and sampling of the soil vapor probes. Because

the Workplan was prepared prior to the release of the 2003 soil vapor Advisory, GSU recommends that the Workplan be updated to ensure that all procedures and equipment are in accordance with the soil vapor Advisory.

In addition, GSU recommends that ten percent of the sample locations having the highest detected concentrations of VOCs should be sampled using SUMMA^{TM} canisters and analyzed using U.S. EPA Method TO-14A with reporting limits not to exceed 1 ug/m^3.

Also, in addition to remedial design support, please update the data quality objectives (DQOs) to include collection of quality VOC data to support a human health risk assessment. Please revise the DQOs to reflect that properly collected soil vapor data in accordance with the previously mentioned soil vapor guidance documents may be utilized not only for VOC screening purposes but also for indoor-air risk pathway assessment as part of the human health risk assessment.

3. Appendix A, InterPhase's Soil Gas Procedures, December 1998

Please provide an updated version of the mobile laboratory's standard soil vapor sampling procedures. Please ensure that the contract mobile laboratory's standard operating procedures are in accordance with the soil vapor Advisory.

If you have any questions, you may contact me by telephone at (714) 484-5492 or by e-mail at jmarcos@dtsc.ca.gov.

cc: Alfredo Zanoria, CEG, CHg
File

Department of Toxic Substances Control

Edwin F. Lowry, Director
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Terry Tamminen
Agency Secretary
Cal/EPA

Arnold Schwarzenegger
Governor

MEMORANDUM

TO: Kathy San Miguel, P.E.
Hazardous Substances Engineer
Geology, Permitting and Corrective Action Branch

FROM: Jose Marcos
Engineering Geologist
Geological Services Unit

CONCUR: Laura Rainey, R.G.
Senior Engineering Geologist
Geological Services Unit

DATE: March 12, 2004

SUBJECT: PHIBRO-TECH, INC., SANTA FE SPRINGS, CALIFORNIA
FINAL PHASE I CORRECTIVE ACTION
SOIL VAPOR SURVEY REPORT
NOVEMBER 16, 2001

PCA: 22120 SITE CODE: 300142 WP: 00 MPC: 19

As requested, the Geological Services Unit (GSU) of the Department of Toxic Substances Control (DTSC) reviewed the document entitled, *"Phibro-Tech, Inc., Santa Fe Springs, California, Final Phase I Corrective Action Soil Vapor Survey Report"*, dated November 16, 2001. The document was prepared by Camp Dresser & McKee Inc. for Phibro-Tech, Inc.

BACKGROUND

As required by the August 2, 1995 "*Hazardous Waste Facility Permit Modification*" for Phibro-Tech, Inc., a soil vapor investigation is required at the facility to characterize the nature and extent of volatile organic compounds (VOCs) in the vadose zone and to determine if remedial action is necessary.

On March 3 and 4, 2001, the facility conducted a limited soil vapor survey at the northwest portion of the facility. Results of the soil vapor investigation were reported in

"Corrective Action Soil Vapor Survey Report" dated April 16, 2001. GSU reviewed the document and provided comments via a memorandum dated June 12, 2001. The revised document was re-submitted as "*Final Phase I Corrective Action Soil Vapor Survey Report*" (Report), dated November 16, 2001. Based on the results of the investigation, the report concluded that additional soil vapor sampling will be necessary to delineate the lateral and vertical extent of the VOC contamination.

On October 17, 2001, the facility submitted "*Phase II Soil Vapor Survey and SVE Pilot Test Work Plan*" proposing to continue the investigation initiated in the March 2001 soil vapor survey.

The following documents were also reviewed in conjunction with the November 16, 2001 "*Phase I Corrective Action Soil Vapor Survey Report*":

- "*Final Soil Vapor Survey Work Plan*", February 16, 1998, revised January 9, 2002
- "*Phase II Soil Vapor Survey and SVE Pilot Test Work Plan*" October 17, 2001

Based on the review of the above-mentioned documents, with emphasis on the "*Phase I Corrective Action Soil Vapor Survey Report*", November 16, 2001, the following comments are noted:

GENERAL COMMENT

1. Additional deficiencies were identified by GSU which would warrant another revision of the soil vapor Report. GSU recommends that as an alternative to revising and re-submitting a soil vapor report which addresses GSU's comments listed below, the facility should wait until the results from the Phase II soil vapor investigation are available and submit a new comprehensive soil vapor report which incorporates the Phase I and II soil vapor survey results.

SPECIFIC COMMENTS

1. Section 4.3, Modeling Potential Impacts of Vadose Zone Soils to Groundwater, page 4

   Please remove this section from the Report as it is premature to calculate remediation goals and remedial action performance criteria. Furthermore, input parameters and assumptions used in the calculations are not acceptable.

2. Section 5.0, Recommendations, page 5

GSU concurs with the recommendation that additional soil vapor samples are necessary to delineate the full lateral and vertical extent of the soil vapor contamination.

However, GSU believes that it is more appropriate to include the details of the proposed additional soil vapor investigation in the Phase II soil vapor survey workplan. Please remove all details pertaining to the proposed additional soil vapor investigation from this Report and incorporate them in the Phase II soil vapor workplan.

3. Figures 3 -1 to 3 -10, VOC Soil Vapor Contours

Please indicate the sample depth(s) for each figure. Also, it is not appropriate to use a 0.0 ug/L concentration value, please use the convention: ND < reporting limit (i.e. ND<1.0 ug/L, constituent not detected above the method reporting limit).

4. Figure 3 – 12, Soil Vapor Concentration for Cross Section B-B'

Please verify and clearly indicate on the figure that the contour lines indicate the total VOC concentration.

The cross section shows the approximate water table elevation at 53 feet below ground surface. Please reference the report from which this data is recorded. Also, please identify the historical shallowest water table depth and reference the document from which the data was obtained.

The cross section shows inferred contours for the 500 ug/L and 1,000 ug/L total VOC concentration. Based on the predominantly increasing vertical trend of the total VOC concentrations, GSU does not concur with the interpretation that the 1,000 ug/L contour should be limited to approximately 43 feet bgs and that a 500 ug/L contour exists below the 1,000 ug/L contour just above the indicated water table. GSU acknowledges that these are only inferred contours, however, GSU believes that the increasing total VOC concentrations for most of the borings do not support these interpretations. Additional vertical and lateral data is necessary to define the extent of the VOC contamination. GSU recommends that the lower 500 ug/L inferred contour be removed and the 1,000 ug/L contour be re-drawn to show queries (i.e. ?) along with the dashed lines due to insufficient vertical data and to indicate that the inferred contours are only interpretations based on the limited data.

5. Figure 3 – 13, Soil Vapor Concentration for Cross Section A-A'

   GSU believes that it is possible that the upper surface of the 300 ug/L contour may extend throughout the length of the cross section and that the lower boundary of the 300 ug/L may not be present as depicted on the cross section. As stated in Specific Comment 4, additional vertical and lateral data is necessary to define the extent of the VOC contamination. Please re-evaluate the cross section and revise accordingly based on the comments provided in Specific Comments 4 and 5.

   GSU also recommends that additional cross sections be developed for the individual VOCs.

6. Table 3 – 2, Off-site Lab Confirmation Results

   Please identify the sample name and depth from which the off-site and on-site samples originated from.

7. Table 4 – 2, Calculated Soil Cleanup Screening Levels

   Please see Specific Comment 1.

8. Table 5 – 1, Soil Vapor Sampling Depths and Appendix C, Calculation Backup for Soil Screening Levels

   Please see Specific Comment 1.

If you have any questions, you may contact me by telephone at (714) 484-5492 or by e-mail at jmarcos@dtsc.ca.gov.

cc: Alfredo Zanoria, CEG, CHg
File

Terry Tamminen
Agency Secretary
Cal/EPA

Department of Toxic Substances Control

Edwin F. Lowry, Director
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Arnold Schwarzenegger
Governor

MEMORANDUM

TO: Kathy San Miguel, P.E.
Hazardous Substances Engineer
Geology, Permitting and Corrective Action Branch

FROM: Jose Marcos
Engineering Geologist
Geological Services Unit

CONCUR: Laura Rainey, R.G.
Senior Engineering Geologist
Geological Services Unit

DATE: March 12, 2004

SUBJECT: PHIBRO-TECH, INC., SANTA FE SPRINGS, CALIFORNIA
PHASE II SOIL VAPOR SURVEY AND
SVE PILOT TEST WORK PLAN
OCTOBER 17, 2001

PHIBRO-TECH, INC., SANTA FE SPRINGS, CALIFORNIA
BIOVENTING TREATABILITY STUDY WORKPLAN
FEBRUARY 16, 1998

PCA: 22120 SITE CODE: 300142 WP: 00 MPC: 31

As requested, the Geological Services Unit (GSU) of the Department of Toxic Substances Control (DTSC) reviewed the documents entitled, *"Phase II Soil Vapor Survey and SVE Pilot Test Work Plan"*, dated October 17, 2001; and *"Bioventing Treatability Study Work Plan"*, dated February 16, 1998. The documents were prepared by Camp Dresser & McKee Inc. for Phibro-Tech, Inc.

Background

As required by the August 2, 1995 "*Hazardous Waste Facility Permit Modification*" for Phibro-Tech, Inc., a soil vapor investigation is required at the facility to characterize the nature and extent of volatile organic compounds (VOCs) in the vadose zone and to

determine if remedial action is necessary.

On March 3 and 4, 2001, the facility conducted a limited soil vapor survey at the northwest portion of the facility. Results of the soil vapor investigation were reported in "Corrective Action Soil Vapor Survey Report" dated April 16, 2001. GSU reviewed the document and provided comments via a memorandum dated June 12, 2001. The revised document was re-submitted as "*Final Phase I Corrective Action Soil Vapor Survey Report*", dated November 16, 2001. Based on the results of the investigation, the report concluded that additional soil vapor sampling will be necessary to delineate the lateral and vertical extent of the VOC contamination.

On October 17, 2001, the facility submitted "*Phase II Soil Vapor Survey and SVE Pilot Test Work Plan*" proposing to continue the investigation initiated in the March 2001 soil vapor survey. A soil vapor extraction (SVE) pilot test workplan proposing to install a pilot well located near MW-11 also accompanied the Phase II Soil Vapor Work Plan. On February 16, 1998, the facility submitted *"Bioventing Treatability Study Work Plan"* proposing to conduct a bioventing treatability study at the former underground storage tank area.

In a letter dated March 20, 2002 from the facility to DTSC, the facility proposed the merging of the SVE pilot testing and bioventing workplans due to the similar design parameters for the two technologies.

The following documents were also reviewed for background reference:

- "*Final Soil Vapor Survey Work Plan*", February 16, 1998, revised January 9, 2002
- "*Final Phase I Corrective Action Soil Vapor Survey Report*", November 16, 2001
- "*Combining SVE/Bioventing Pilot Testing at the Phibro-Tech, Inc., Santa Fe Springs Facility*", March 20, 2002

Based on the review of the above-mentioned documents, with emphasis on the "*Phase II Soil Vapor Survey and SVE Pilot Test Work Plan*", dated October 17, 2001, and "*Bioventing Treatability Study Work Plan*", dated February 16, 1998, the following comments are noted:

GENERAL COMMENTS

1. As stated in previous GSU memoranda, GSU understands that the facility wishes to move forward with a limited Phase II soil vapor survey to support the design and implementation of the SVE pilot testing program. However, permit compliance requires complete characterization of the nature and extent of VOC

impacts. Knowledge of the nature and extent of VOC impacts is necessary and critical for the appropriate design of a SVE system, for both pilot testing and full scale implementation.

GSU emphasizes the need to fully understand the nature and extent of the VOC impacts prior to implementing any remedial action program.

2. Please propose the additional modifications identified in the March 20, 2002 letter into the Phase II and SVE workplan and submit to DTSC for review and consideration. In addition, as requested by the facility, please incorporate the bioventing workplan with the SVE pilot test workplan during the submittal of the revised documents.

3. GSU defers comments to the DTSC Engineering Services Unit for issues pertaining to the SVE pilot testing and bioventing design parameters.

SPECIFIC COMMENTS

"Phase II Soil Vapor Survey and SVE Pilot Test Work Plan", dated October 17, 2001

1. Section 1.0, Introduction, page 1

"The results of the survey were reported in the *Corrective Action Soil Vapor Survey Report* (CDM, April 16, 2001)."

In addition to the April 16, 2001 report, a November 16, 2001 "*Final Phase I Corrective Action Soil Vapor Survey Report"* was also submitted to DTSC. Please state clearly that two reports have been submitted containing the results of the initial soil vapor survey and that a comprehensive soil vapor report will be submitted incorporating the Phase I and Phase II soil vapor survey results as recommended by GSU in the memorandum pertaining to the "*Final Soil Vapor Survey Work Plan*", February 16, 1998, revised January 9, 2002.

2. Section 2.2, Sample Locations, page 3

The Phase II workplan removed SV-38 located between MW-11 and SV-8 that was previously proposed in "*Final Soil Vapor Survey Work Plan*", February 16, 1998, revised January 9, 2002. GSU recommends the inclusion of SV-38 to be sampled at 5, 18, 30 and 45 feet bgs.

3. Section 2.3, Sampling Methods, page 3

"The Phase II CASVS will be performed according to method described in the *Final Soil Vapor Survey Work Plan* (CDM, October 2001, pending), which incorporates DTSC comments on the draft work plan. These are the methods that were used to perform the Phase I CASVS"

Please note that the "*Final Soil Vapor Survey Work Plan*", February 16, 1998, revised January 9, 2002 is outdated and currently not acceptable for the proposed Phase II soil vapor survey. Please refer to the specific GSU memorandum pertaining to the said document where GSU recommended that the workplan be revised and updated and will serve as a generic soil vapor survey workplan for future soil vapor investigations, including the Phase II soil vapor investigation. Approval of the Phase II and SVE workplan is contingent upon the approval of the generic soil vapor workplan.

4. Section 3.0, SVE Test, page 5

Please see General Comment 1.

Please explain how the Phase II soil vapor survey results will be utilized for the design and implementation of the SVE pilot study.

5. Section 3.2.1, SVE Wells, page 5 and Section 3.2.2, Monitoring Points, page 8

Because proper placement of the screen interval is critical in the design and installation of vadose zone monitoring wells and future vapor extraction wells, GSU recommends the inclusion of detailed lithologic data (i.e. boring logs) from nearby borings. If possible, the figures depicting the well designs should also incorporate lithologic data from nearby borings.

6. Section 4.2, Reporting, page 14

"CDM will submit a combined Phase II CASVS and SVE Pilot Test Report."

As stated previously, GSU recommends the submittal of a comprehensive soil vapor survey report composed of the Phase I and II soil vapor survey results. The SVE pilot test should be conducted after the nature and extent of the VOC contamination has been sufficiently characterized.

7. Section 5.3, Health and Safety, page 15

   Please verify the existence of a current and approved health and safety plan.

8. Section 5.4, Permitting, page 15

   Please provide additional details regarding the necessary permits required to conduct the proposed activities.

9. Section 5.5, Residual Management, page 15

   Please provide additional details regarding the handling of investigation derived and other wastes generated from the proposed activities.

If you have any questions, you may contact me by telephone at (714) 484-5492 or by e-mail at jmarcos@dtsc.ca.gov.

cc: Alfredo Zanoria, CEG, CHg
File

Department of Toxic Substances Control

Edwin F. Lowry, Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Gray Davis
Governor

MEMORANDUM

TO: Kathy San Miguel, Project Manager
Geology and Corrective Action Branch, Cypress
(714) 484-5380 Fax: (714) 484-5411

VIA: John Hart, P.E., Chief
Engineering Services Unit
(916) 255-6663 Fax: (916) 255-3697

FROM: Laszlo Saska, P.E.
Engineering Services Unit
(916) 255-6668 Fax: (916) 255-3697

REGISTERED PROFESSIONAL ENGINEER
LASZLO SASKA
No. 4776
Exp. 6/30/04
CHEMICAL
STATE OF CALIFORNIA

DATE: September 6, 2002

SUBJECT: Phase II Soil Vapor Survey and SVE Pilot Test Work Plan, Phibro-Tech, Inc., by CDM Camp Dresser & McKee, dated October 17, 2001

On February 14, 2002, you had forwarded the above referenced document (Work Plan) to the Engineering Services Unit (ESU) for review. You had requested our technical evaluation of the portions of the Work Plan pertaining to the soil vapor extraction (SVE) Pilot Test Work Plan. As a result of our review, ESU would like to offer the following comments for your consideration.

Summary:

The Work Plan, as it pertains only to the SVE Pilot Test, in an overall sense, is a competent and reasonable document under which to conduct an SVE pilot test. More specifically, however, ESU has identified a few areas that we feel require clarification or modification to complete the Work Plan and to improve its test results. These areas are detailed below.

Comments and Recommendations:

1) Objectives: ESU concurs that executing the Work Plan as written and with the noted recommendations below will provide the necessary data to meet the stated SVE objectives.

2) Zone of Influence: The Work Plan suggests that the zone of influence (ZOI), also known as radius of influence or ROI, be defined based on the observed vacuum responses in the monitoring wells, although it does not state the minimum vacuum response at which the ZOI is to be defined.

In general, ESU recommends that the determination of the ZOI of an SVE well be based on a minimum vapor velocity through the soil pores, instead of on the traditional minimum observed vacuum response. The minimum pore vapor velocity at the ZOI, usually of 0.01 cm per second, provides for a good balance between extraction economics and mass removal rates by taking into account diffusion from tighter formations, vapor travel times from the fringes of the ZOI to the extraction well, etc. The minimum pore velocity is modeled using both observed vacuum responses and on the measured local soil permeabilities. However, for smaller sites where modeling of ZOI using local pore velocities would be disproportionately labor intensive, ZOI may instead be based on the traditional vacuum response if a conservative minimum vacuum value is chosen. Thus, ESU recommends that the ZOI be defined as the radial distance from the extraction well at which the observed vacuum response is at least 0.2 inches of water.

3) Monitoring Points: Figure 3-1 of the Work Plan indicates the locations of the proposed monitoring points to be used for monitoring the vacuum response in the subsurface. For extraction well SVE-1, the monitoring points are located at approximate distances of 27, 125, 135, and 164 feet. In general, the locations and the magnitude of distances of the monitoring points appear appropriate for the fine/coarse sandy type of soil. However, a significant gap in monitoring ability exists between the 27- and 125-foot distances. For this reason, ESU recommends that either the monitoring points be rearranged, or an additional monitoring point be established, such that a monitoring location be made available in the 40- to 50-foot radial distance from SVE-1.

4) PID Measurements: As the Work Plan correctly mentions, a vacuum pump may be necessary to pull VOC samples for the field PID instrument from sample ports with high enough vacuum levels. ESU recommends that the manufacturer of the PID instrument be consulted prior to the SVE pilot testing to determine the requirements for such a

pump, in order to ensure that measurements by the PID are indeed representative of actual conditions in the low pressure vapor extraction lines.

5) Vadose Zone Vacuum Measurements: The Work Plan states that "*wellhead vacuum will be measured and a value will be recorded when the reading is stable. Vacuum readings will then be taken at all vadose zone monitoring points.*" Perhaps the intent is already implied, but to be explicit, ESU recommends that final vacuum readings at the vadose zone monitoring points be taken only after the vacuum readings have stabilized at those points also.

6) Off-site Vapor Quality Measurements: The Work Plan proposes to collect one sample from each extraction well during the step-test portion of the pilot test. The Work Plan does not state during which step of the step-test the off-site sample is to be collected from each well. Regardless, it may be more appropriate to collect at least two samples from each of the extraction wells for off-site analysis. Perhaps one sample could be collected during the first step (i.e. the 25-scfm step) and one during the last step, whichever that may be. Such an approach would provide the benefit of having more data to evaluate the representativeness of the PID measurements as compared to the off-site analysis results, as well as allow a preliminary indication of any VOC speciation with respect to time. Thus, ESU recommends that at least two Summa canister-based samples be collected for off-site analysis from each of the extraction wells, one early and one late during the step-tests. ESU also recommends that the final SVE Pilot Test Report, which is to include the results of the SVE Pilot Test, include a brief comparative analysis of the measurements by the PID field instrument and those of the off-site laboratory.

7) Schedule of Testing: ESU recommends that an appropriate amount of time gap (as determined by subsurface monitoring) be established between the end of the short-term performance test for SVE-1 and the start of the step-test for SVE-2 to allow for the desired equilibration of subsurface vacuum levels.

8) Vapor Treatment System Measurements: The Work Plan is silent about the specifics of monitoring the activated carbon vapor treatment system, as well as about the conditions that would require vessel rotation or carbon change out. Thus, ESU recommends that the following be clearly specified in the Work Plan: 1) monitoring frequencies, 2) monitoring locations, 3) monitoring types, 4) system emission limitations, 5) criteria (such as amount of VOC breakthrough) that triggers specific actions for the vapor treatment system, such as vessel rotation, carbon change-out, etc.

* * *

Should you have any questions, please do not hesitate to contact ESU.

cc: Laura Rainey, DTSC

Department of Toxic Substances Control

Edwin F. Lowry, Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Gray Davis
Governor

MEMORANDUM

TO: Kathy San Miguel, Project Manager
Geology and Corrective Action Branch, Cypress
(714) 484-5380 Fax: (714) 484-5411

VIA: John Hart, P.E., Chief
Engineering Services Unit
(916) 255-6663 Fax: (916) 255-3697

FROM: Laszlo Saska, P.E.
Engineering Services Unit
(916) 255-6668 Fax: (916) 255-3697

REGISTERED PROFESSIONAL ENGINEER
LASZLO SASKA
No. 4776
Exp. 6/3-/04
CHEMICAL
STATE OF CALIFORNIA

DATE: September 6, 2002

SUBJECT: Bioventing Treatability Study Work Plan, Phibro-Tech, Inc., by Camp Dresser & McKee, dated February 16, 1998

On April 23, 2002, you had forwarded the above referenced document (Work Plan) to the Engineering Services Unit (ESU) for review. You had requested our technical evaluation of the above Bioventing Treatability Study Work Plan (Bio Work Plan). ESU had reviewed the Bio Work Plan.

Incidentally, ESU had also reviewed another submittal for Phibro-Tech, Inc.: the *Phase II Soil Vapor Survey and SVE Pilot Test Work Plan*, (SVE Work Plan) dated October 17, 2001, also by Camp Dresser & McKee. ESU provided comments to you on that document in a separate memorandum, also dated September 6, 2002.

Our comments at this time focus only on the relationship of the two proposals.

The Bio Work Plan notes that any future bioventing system would target the location of the former Underground Storage Tanks (UST). However, this location will apparently be also covered by soil vapor extraction (SVE) activities in the future. Thus, coordination of the two remedial activities, starting with their predecessor work plans and pilot studies, is important.

RECORDS SEPARATOR PAGE

APR 4 1990

00001

4E

SOUTHERN CALIFORNIA LABORATORY
HAZARDOUS MATERIALS UNIT
1449 W. TEMPLE STREET, LOS ANGELES
TEL: 213 620-3376

NARRATIVE

1. THIS ANALYTICAL REPORT PACKAGE WAS PREPARED FOR SCL SAMPLES 8649 to 8652

2. SAMPLES WERE COLLECTED ON 03/14/90 AT SOUTHERN CALIFORNIA CHEMICALS

3. COLLECTOR'S NAME ON THE SAMPLE ANALYSIS REQUEST FORM IS DAVID RASMUSSEN

4. SAMPLES WERE :

   RECEIVED ON 03/15/90

   EXTRACTED ON 03/19/90 - 03/20/90 BY EPA METHOD 3540 (SOXHLET EXTRACTION).

   CLEANUP ON 03/20/90 - 03/21/90 BY EPA METHOD 3620 (FLORISIL COLUMN CLEANUP).

   ANALYZED ON 03/22/90 - 03/29/90 BY EPA METHOD 8080/8081 (PCB ANALYSIS).

   DATA PACKAGE WAS COMPLETED ON 03/29/90.

5. DURING THE COURSE OF THESE ANALYSIS, the first set of Matrix Spike/Matrix Spike Duplicate analysis result was out of the established QC limit and was rejected, due to a high background level of PCB 1260 and inadequate level of spike. MS/MSD analysis was repeated with sample SCL 8659. Satisfactory data was obtained. NO OTHER PROBLEMS WERE ENCOUNTERED.

6. ALL QC PARAMENTERS WERE WITHIN ESTABLISHED CONTROL LIMITS.

7. HOLDING TIMES WERE MET.

8. INSTRUMENT INITIAL CALIBRATION & CONTINUING CALIBRATION CRITERIA WAS MET.

SOUTHERN CALIFORNIA LABORATORY
HAZARDOUS MATERIALS UNIT
1449 W. TEMPLE STREET, LOS ANGELES
TEL: 213 620-3376

TABLE OF CONTENTS
(PCB ANALYSIS SCL 8649-8660)

TOTAL PAGES = 7

State of California-Health and Welfare Agency — Department of Health Services

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

All applicable items must be completed

1. HML No. To

2. Page 1 of 2

3. Collector/Address: David Rasmussen, 1405 N San Fernando Bl. Burbank, CA

4. Phone (818) 567-3057

5. Priority ☐ a. Authorized by

6. Date Sampled: 3-14-90

7. Time Sampled: 10:00 Hours

8. Codes (fill in all applicable codes)

a. STC	3040
b. Region	3
c. TPC	
d. INDEX	7040
e. PCA	34000
f. SITE	
g. County	031

9. Activity: ☑ Enf ☑ Surv ☐ Site Mit ☐ Permitting ☐ Alt Tech ☐ Other

10. SAMPLING LOCATION

a. EPA ID No. CAD0084888[illegible]5

b. Site: Southern California Chemical

c. Address: 8851 Dice Road, Santa Fe Springs (Number, Street, City, Zip)

11. SAMPLES

a. ID	b. Collector's No.	c. HML No.	d. Type	e. Container Type	f. Container Size	g. Field Information
A.	SCCDM-1	8649	Soil	glass	500ml	Proposed ferric chloride area near FC tank 11 FT N pole
B.	SCCDM-2	8650	Soil	glass	↓	NFCA - even with yellow pole [illegible] IN scrap middle pole near RR
C.	SCCDM-3	8651	Soil	glass	↓	NFCA - even with pole & yellow pole
D.	SCCDM-4	8652	Soil	Glass	↓	NFCA - end of RR tracks. even with S side berm of FCA
E.	SCCDM-5	8653	powder	glass	↓	copper 'nitrate' drum in copper oxide drying area
F.	SCCDM-6	8654	powder	Glass	↓	ground behind drum copper oxide drying area
G.	SCCDM-7	8655	Powder	Glass	↓	'Leaker' tray copper oxide E of whouse
H.	SCCDM-8	8656	powder	Glass	↓	black powder on ground at building

12. ANALYSIS REQUESTED

a. ☑ pH: A, B, C, D.

b. ☑ Metal Scan

c. ☐ Metals (Spec)

d. ☑ W.E.T.: ~~A, B, C, D, G, H~~ G if needed

f. ☑ PCB: A, B, C, D

g. ☐ VOA

h. ☐ PAH

i. ☐ Phenols

j. ☐ Carbamates

k. ☐ Ext. Org (Screeng)

l. ☐ Chlorinated Pesticides

m. ☐ Organo-P Pesticides

n. ☐

o. ☐

13. CHAIN OF CUSTODY

	Signature	Name/Title	Inclusive Dates
a.	David B Rasmussen	David Rasmussen Hazardous Material Specialist	3/14/90 - 3/15/90
b.			/ / - / /
c.			/ / - / /
d.			/ / - / /

14. SPECIAL REMARKS

15. RECEIVED BY: [illegible signature] a. Title: PH Chemist III b. Date: 3/15/90

16. SAMPLE ALLOCATION a. ☐ HML-Berkeley b. ☐ HML-SC c. ☐ AIHL d. ☐ Contract b. Date

17. ANALYSIS REQUESTED

FIELD

LAB

State of California-Health and Welfare Agency — Department of Health Services

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

All applicable items must be completed

1. HML No. To

2. Page 2 of 2

3. Collector/Address: David Rasmussen, 1405 N. San Fernando Bl, Burbank, CA

4. Phone: (818) 567-3057

5. Priority ☐ a. Authorized by

6. Date Sampled: 3-14-90 — 7. Time Sampled: 16 00 Hours

8. Codes (fill in all applicable codes)

a. STC	3040
b. Region	3
c. TPC	
d. INDEX	7040
e. PCA	34000
f. SITE	
g. County	031

9. Activity: ☑ Enf ☑ Surv ☐ Site Mit ☐ Permitting ☐ Ait Tech ☐ Other

10. SAMPLING LOCATION

a. EPA ID No.: CAD008148802S

b. Site: Southern Cal. Chemical

c. Address: 8857 Dice Road, Santa Fe Springs (Number / Street / City / Zip)

11. SAMPLES

a. ID	b. Collector's No.	c. HML No.	d. Type	e. Type	f. Size	g. Field Information
			Container			
A.	SCCDM9	8657	powder	glass	500ml	Tecker Try near maintenance shop
B.	SCCDM10	8658	sludge/liquid	glass	500ml	oily type waste drum
C.	SCCDM11	8659	soil	glass	500ml	Grand near Pond 3
D.	SCCDM12	8660	sludge	glass	500ml	Front gutter
E.						
F.						
G.						
H.						

12. ANALYSIS REQUESTED

a. ☑ pH C
b. ☑ Metal Scan
c. ☐ Metals (Spec)
d. ☑ W.E.T. A, D, Freedol
f. ☑ PCB C
g. ☐ VOA
h. ☐ PAH
i. ☐ Phenols
j. ☐ Carbamates
k. ☐ Ext. Org (Screeng)
l. ☐ Chlorinated Pesticides
m. ☐ Organo-P Pesticides
n. ☐
o. ☑ TPH on B

13. CHAIN OF CUSTODY

	Signature	Name/Title	Inclusive Dates
a.	David Rasmussen	David Rasmussen / Hazardous Material Specialist	3/14/90 - 3/15/90
b.			/ / - / /
c.			/ / - / /
d.			/ / - / /

14. SPECIAL REMARKS

15. RECEIVED BY: [signature] a. Title: PH Chemist III b. Date: 3/15/90

16. SAMPLE ALLOCATION a. ☐ HML-Berkeley b. ☐ HML-SC c. ☐ AIHL d. ☐ Contract b. Date

17. ANALYSIS REQUESTED

FIELD

LAB

Laboratory Report
Southern California Laboratory - Hazardous Materials Unit
1449 W. Temple Street, Los Angeles, CA 90026
Telephone 213-620-3376

Collector's Name :DAVID RASMUSSEN

SCL NO. : 8657 TO 8660

Sample Location :SOUTHERN CAL. CHEMICAL
8851 DICE ROAD, SANTE FE SPRING

Date Reported : 3/29/90

Analytical Procedures Used : EPA 8080/8081 FOR ANALYSIS
EPA 3540 FOR EXTRACTION
EPA 3620 FOR CLEANUP

PCBs ANALYSIS

							DETECTION LIMIT			
	SCL NO.	8649	8650	8651	8652	8659	8649	8650	8651 8652	8659
	COL. NO.	SOCDM -1	SOCDM -2	SOCDM -3	SOCDM -4	SOCDM -11				
	MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL				
CAS NO.	UNITS	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
12674-11-2	PCB 1016	ND	ND	ND	ND	ND	50	250	200	10
11104-28-2	PCB 1221	ND	ND	ND	ND	ND	50	250	200	10
11141-16-5	PCB 1232	ND	ND	ND	ND	ND	50	250	200	10
53469-21-9	PCB 1242	ND	ND	ND	ND	ND	50	250	200	10
12672-29-6	PCB 1248	ND	ND	ND	ND	ND	50	250	200	10
11097-69-1	PCB 1254	ND	ND	ND	ND	ND	50	250	200	10
11096-82-5	PCB 1260	180	710	450	660	15	50	250	200	10
37324-23-5	PCB 1262	ND	ND	ND	ND	ND	50	250	200	10

Note: ND = Not Detected NA = Not Analyzed

Sample Preparation	Analyst	Supervising Chemist
Monina Ligao 3/30/90	Monina Ligao 3/32/90	Russ Chin 3/30/90
MONINA LIGAO Date	MONINA LIGAO Date	RUSS CHIN Date

QUALITY CONTROL (QC) REPORT
SOUTHERN CALIFORNIA LABORATORY - HAZARDOUS MATERIALS UNIT
1449 W. TEMPLE STREET, CA 90026
TEL: 213 620-3376

COLLECTOR'S NAME: DAVID RASMUSSEN
SAMPLING LOCATION:SOUTHERN CAL. CHEMICAL
ANALYTICAL BATCH LAB ID NO.: SCL 8649 TO 8652 & 8659

DATE SAMPLE RECEIVED: 03/15/90
DATE SAMPLE PREPARED: 03/19/90 - 03/21/90
DATE SAMPLE ANALYZED: 03/22/90 - 03/29/90

ANALYTICAL PROCEDURES USED: EPA METHOD 8080/8081 GC/ECD FOR PCB ANALYSIS
EPA METHOD 3540 SOXHLET EXTRACTION
EPA METHOD 3620 FLORISIL COLUMN FOR CLEANUP

QC SUMMARY FOR

A: METHOD BLANK
B: METHOD STANDARD RECOVERY - PCB 1260 WAS ANALYZED
C: LABORATORY CONTROL SAMPLE - SOIL MATRIX WITH PCB 1260 WAS ANALYZED
D: SAMPLE DUPLICATE ANALYSIS

	A	B		C	
		METHOD STANDARD		LABORATORY CONTROL SAMPLE	
	METHOD BLANK	RECOVERY	CONTROL LIMIT	Found	Control limit
COMPOUND	mg/kg	%	%	mg/kg	mg/kg
PCB 1016	<0.5				
PCB 1221	<0.5				
PCB 1232	<0.5				
PCB 1242	<0.5				
PCB 1248	<0.5				
PCB 1254	<0.5				
PCB 1260	<0.5	100	80 - 120	16	11.0-16.3
PCB 1262	<0.5				

D			
DULPICATE SAMPLE ANALYSIS Performed on SCL 8650 Matrix SOIL			
	Run 1	Run 2	RPD
COMPOUND	mg/kg	mg/kg	%
PC8 1260	720	696	3.4
			-
Control Limit			<20

NOTE : NA = not analyzed

SAMPLE PREPARATION		ANALYST		SUPERVISING CHEMIST	
Monina Ligao	3/31/90	Monina Ligao	3/31/90	Russ Chin	3/30/90
MONINA LIGAO	DATE	MONINA LIGAO	DATE	RUSS CHIN	DATE

QUALITY CONTROL (QC) REPORT
SOUTHERN CALIFORNIA LABORATORY - HAZARDOUS MATERIALS UNIT
1449 W. TEMPLE STREET, CA 90026
TEL: 213 620-3376

COLLECTOR'S NAME: DAVID RASMUSSEN
SAMPLING LOCATION: SOUTHERN CAL. CHEMICAL
ANALYTICAL BATCH LAB ID NO.: SCL 8649 TO 8652 & 8659

DATE SAMPLE RECEIVED:03/15/90
DATE SAMPLE PREPARED:03/19/90 - 03/21/90
DATE SAMPLE ANALYZED:03/22/90 - 03/29/90

ANALYTICAL PROCEDURES USED: EPA METHOD 8080/8081 GC/ECD FOR PCB ANALYSIS
EPA METHOD 3580 SOXHLET EXTRACTION
EPA METHOD 3620 FLORISIL COLUMN FOR CLEANUP

QC SUMMARY FOR
MATRIX SPIKE(MS)/MATRIX SPIKE DUPLICATE(MSD) PERCENT RCOVERY

MATRIX SPIKE REFORMED ON SCL 8659 TYPE OF MATRIX SOIL TYPE OF PCB SPIKED PCB 1260

COMPOUND	AMOUNT OF ANALYTE IN SAMPLE	AMOUNT ANALYTE ADDED	MATRIX SPIKE		MATRIX SPIKE DUPLICATE		AVE % REC	CONTROL LIMITS FOR % REC	R % D BETWEEN MS/MSD	CONTROL LIMITS FOR RPD
			AMOUNT RECOVERED	% REC	AMOUNT RECOVERED	% REC				
	mg/kg	mg/kg	mg/kg	%	mg/kg	%	%	%	%	%
PCB 1260	15	100	105	90.0	110	95.0	92.5	68.0-123	5.4	<20

SAMPLE PREPARATION

Monina Ligao 3/30/90
MONINA LIGAO DATE

ANALYST

Monina Ligao 3/30/90
MONINA LIGAO DATE

SUPERVISING CHEMIST

Russ Chin 3/30/90
RUSS CHIN DATE

RECORDS SEPARATOR PAGE

Workplan
Remedial Actions for Soil Mound Area

Southern California Chemical Company
Santa Fe Springs, California

Prepared by

Targhee, Inc.
Long Beach, California

NO

" OFFICIAL DATE "

GIVEN

FOR THESE DOC(S)

07-22-99

MJR

I. Introduction

The August 28, 1987 Consent Agreement between the State of California Department of Health Services (DHS) and Southern California Chemical Company (SCC) requires that SCC clean up and remove any hazardous wastes which may be contained in that portion of the facility on which several mounds of dirt and rock are presently located (the soil mound area).

This workplan will delineate the scope of the problem and discuss various remedial methodologies. The proposed remedial action for the soil mound area will be presented including the specific activities required as well as their justification. A tentative schedule will also be presented. Actual, fixed dates will depend on receipt of agency approval(s) and resource availability.

II. Scope of Problem

The soil mound area is located in the northern portion of SCC's Santa Fe Springs facility and is approximately 160 feet by 60 feet in size (see Plot plan, Appendix I). It is underlain by soil and bordered to the east, south, and west by concrete or asphalt paving. Immediately to the north is the fenced facility boundary and a railroad spur to an adjacent facility.

The materials in question consist primarily of soil, rock, asphalt, and concrete debris piled in mounds 3'-4' high throughout the subject area. All materials originated on site as a result of construction and facility improvement activities with the majority resulting from construction of the central roadway.

Agency concern was communicated to SCC on November 6, 1986 resulting from a June 25, 1986 sampling inspection by DHS following an April 29, 1986 Notice of Violation. Analysis of the samples taken from the soil mound area indicated levels of lead, zinc, and copper above background. It was noted at that time that the area contained soils that, "appeared to be dark brown/dark black (contaminated) in some spots and light brown (uncontaminated) in other spots..." (See Appendix II). The subject samples (listed as SCC01, SCC02, and SCC03) were taken from those portions of the mounds where - "Soil color was dark brown." These analytical results are included as Appendix III.

Subsequent to these notices, SCC excavated those portions of the mounds displaying obvious visual contamination. These materials were manifested and disposed at a Class I facility. (See Appendix IV. for the representative manifests.) However, considerable debris and lighter colored soils remain in the soil mound area at this time.

III. Remediation Methodologies

Sections 3.1.15(a)(1) and 3.1.15(c)(4) of the Consent Agreement stipulate that the proposed remedial effort,"... remove any hazardous waste(s) which may be contained in...that portion of the northeastern quadrant of the facility on which several mounds of dirt and rocks are presently located (the soil mound area);" and "... that the soil mound area ...[be]...completely removed." Direction of this nature and specificity precludes investigating alternative remediation methodologies such as encapsulation, stabilization, or other in-situ techniques. The proposed remedial action described in the following section will detail the total removal of mounded soils, concrete and other debris in the subject area.

IV. Proposed Remedial Action Plan.

The existence of limited contamination in the soil mound area (at the initial sampling episode) has been demonstrated but not fully characterized. In consideration of the Consent Agreement as well as temporal constrains, further sampling and analysis of mounded materials is unwarranted. No segregation of contaminated or uncontaminated material is contemplated. Further, as the original waste profile will be utilized, no additional waste characterization is required prior to disposal at the Class I facility.

A. Remediation Plan

SCC propose to comply with the requirements of the Consent Agreement, Section 3.1.15 pertaining to the soil mound area by performing the following series of tasks:

1. The actual extent of the soil mound area will be physically demarcated at the facility and indicated on a plot plan.

2. All mounded materials including soils, concrete, asphalt, and other miscellaneous debris will be removed to existing grade level.

3. These materials will be manifested and properly transported by a licensed waste hauler to a Class I disposal facility.

4. SCC will notify DHS within 15 days of project completion that all proposed work has been completed according to Section 3.1.15 (c) of the Consent Agreement.

B. Health and Safety

The following health and safety precaution will be observed during the working phases of this project:

1. SCC personnel not directly involved in the clean up project will be restricted from the immediate work area.

2. All SCC, contractor, transportation, or supervisory personnel will be provided with appropriate personal protective equipment. This will consist of Tyvek (or equivalent) coverall and respiratory protection for any airborne particulate contaminants.

A preconstruction health and safety tailgate meeting will be conducted and documented prior to commencement of work.

C. Sampling

Random samples of the mounded material will be taken during removal by SCC laboratory personnel and analyzed for metals and pH. These will be retained for documentation purposes only. Copies of the analytical results will be provided to DHS as they are available.

D. Supervision of Work

All work encompassing the physical delineation of the soil mound area, materials removal, and health and safety requirements will be supervised by authorized representatives of Targhee, Inc., the designated project supervisor. (See Section 4.1 of the Consent Agreement.)

E. Documentation

SCC will provide the following documentation to DHS:

1. Plot plan of the facility indicating the extent of the soil mound area.

2. Manifest records of material transported from the soil mound area to the Class I disposal facility.

3. Documentation of the tailgate health and safety advisory meeting.

4. Analytical results of samples taken from the soil mound area during removal.

5. Certification that the soil mound area has been removed in accordance with Section 3.1.15 (c)(4) of the Consent Agreement.

V. Schedule

Following DHS review, comment, and approval of this work plan as stipulated in Section 3.1.15(d) of the Consent Agreement, SCC proposes the following schedule:

A. DHS approval received.

B. Within 30 days following Action A the following tasks will be completed:

1. Demarcation of soil mound area.

2. Removal of materials in soil mound area.

3. Transport of removed material to a Class I disposal facility.

C. Within 45 days following Action A. notification will be made to DHS of work completion (this is the 15 day notice required by the Consent Agreement).

D. Within 60 days following Action A. all documentation (excepting analytical data) as described in Section E. will be submitted.

E. Analytical results will be submitted to DHS as available.

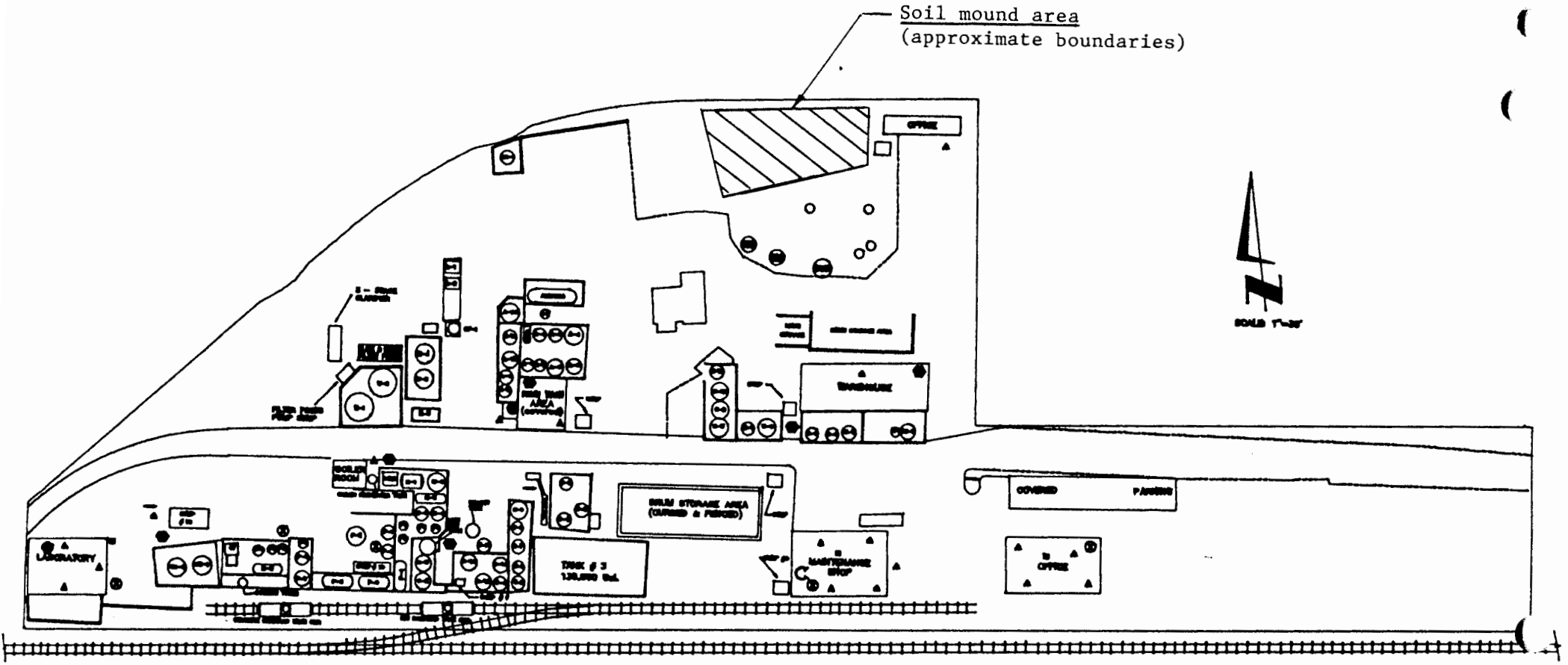
Appendices

I. Plot plan of SCC facility indicating soil mound area.

II. June 25, 1986 DHS sampling inspection comments.

III. June 25, 1986 DHS sampling inspection analytical results.

IV. Hazardous Waste Manifests for selected material removed from the soil mound area in late 1986.



SITE PLAN
SOUTHERN CALIFORNIA CHEMICAL Co.

Sampling Inspection

Southern California Chemical --EPA ID NUMBER CAD 008488025
8851 Dice Road, Santa Fe Springs, CA 90670
Los Angeles County
(213) 698-8036

On June 25, 1986, a sampling inspection was conducted at the facility by the Department of Health Services (DHS) Surveillance and Enforcement Unit in Los Angeles. The purpose of the inspection was to delineate areas of contamination alleged in the Notice of Violation dated April 29, 1986.

I. Persons Present: Barron Peeler;Hazardous Materials Specialist-Southern California Section
Steve Lavinger;Hazardous Materials Specialist-Southern California Section
Mary Osborne;Hazardous Materials Specialist-Southern California Section
Milton Giorgitta;Plant Manager-Southern California Chemical
Sonya Shuartsman;Senior Chemist-Southern California Chemical

II. Description of Facility: The facility recycles copper sulfate and ferric chloride. Waste are treated by process of oxidation and precipitation of chemicals consisting of inorganics (acids, caustics, sulfurics and ammonias).

Before July of 1985, the waste from facility operations was pumped into a surface impoundment-Pond #1 (see attached Map). Pond #1 has been replaced by two treatment tanks. Waste are reclaimed for resale.

III. Inspection Activities and Observations at S.C.C.

At approximately 1330,Department of Health Services inspectors arrived at the site. We met with Milton Giorgitta, plant manager of Southern California Chemical. We informed Mr. Giorgitta that we wished to collect samples to delinate areas contaminated. Three areas were initially choosen for investigation.

1. Soil Mound Area.

2. Pond #3 Area (Rain Water Holding Tank Area).

3. Back parking lot area.

Mr. Giorgitta gave his consent for Department of Health Services inspectors to sample and requested splits. At approximately 1400, the sampling had begun. Split samples were collected by Sonya Shuartsman, Senior Chemist. Pictures of samples and sampling area were taken by Mary Osborne-DHS. Steve Lavinger collected the samples and Barron Peeler assisted with logging the samples. All soil samples were collected from the surface. (Map of sampling locations is attached).

A total of twelve samples were collected. Eleven (11) samples were collected in glass jars (for the analysis of metals and pH) and one in a VOA vial (for analysis of volatile organics). Samples were numbered in the field from SCC01 to SCC12. The sample numbers and field information related to each sample are as follows.

Area 1: Soil Mound Area Observations of soil discoloration in this area were made during March 25, 1986 DHS inspection. The color of the soil on that day and the day of this inspection appeared to be dark brown/black (contaminated) in some spots and light brown (uncontaminated) in other spots Area 1. Strongly marked variations in soil color is commonly associated with chemical contamination.

The following samples were collected in Area 1:

SCC01-At approximately 1415 hours a soil sample was taken from the northeast section of the facility (see map for location). Soil color was dark brown. Texture was uncompacted. No odors were detected in the proximity of the soil mound area.

SCC02-A soil sample was taken approximately fifteen (15) feet east of sample #SCC01 (see map for location). Soil characteristics were same as SCC01.

SCC03-A soil sample was taken from the mound approximately ten (10) feet southwest of sample #SCC01 (see map for location). Soil characteristics were same as SCC01.

Area 2 Pond #3 /Rain Water Holding Tank Area: Observation of soil discoloration in this area were made during the March 25, 1986 Department of Health inspection. Also that day a greenish color liquid was observed coming from the rain water holding tank and running off to the off-site area just south of Pond #3. On

the day of this inspection, other places within this area were identified for sampling.

The following samples were collected in this area:

SCC04-At approximately 1435 hours a soil (mud) sample was taken outside the facility from an area five (5) feet south of the hydrochloric acid reactor unit (see map for location). The area was distinguished by a muddy area near a railroad tank car which appeared to be loading or off loading chemicals. Soil color was brown with white unidentified substance spilled on top of soil.

SCC05-A soil sample was taken from an off-site area just south of Pond three in between monitoring well location 6B and an off-site drain (flood control ditch). The drain appeared to have a new grate with no visible signs of recent runoff. Soil was fairly compacted with traces of greenish blue materials in this off-site area.

SCC06-A soil sample was taken approximately five (5) feet from south east corner of Pond three from the base of the old concrete slab that had been removed in early June of 1986. Mr. Giorgitta stated this area had been recently worked on and some of the material removed to the mound area. (Area 1) Soil color was brown. Soil was uncompacted.

SCC07-A liquid sample was taken from the line leading out of Pond 3 into a sump. The liquid was light green.

SCC08-A liquid sample was taken from the line leading out of Pond 3 into a sump. The liquid was light green and collected in a VOA vial.

Area 3 <u>Back Parking Lot Area</u> Observations of soil discoloration were made during the March 25, 1986 inspection. On the day of this inspection, unidentified open top drums and soil discoloration from possible spillage were observed. Mr. Giorgitta stated the materials in Area three also came from the excavated dirt from installation of the ground water monitoring wells in 1985.

SCC09-At approximately 1500, a soil sampling began in Area three. A soil sample was collected from the surface in an area just
north of the tracks. Sample SCC09 was collected directly

behind well number three section of drums. Sample was brownish orange color. The area appears to have stains from previous spillage.

SCC10-Soil sample was collected in some general area as SCC09. Samples color was dark brown.

SCC11-Sample was collected from an unmarked open top drum. Sample color was greenish blue. No odors were detected in this area.

SCC12-Soil samples was collected in same general areas as SCC11. Samples was collected from an unmarked open top drum. Sample color was greyish black.

At Approximately 1600, sampling was completed. During the closing conference, DHS informed Mr. Giorgitta that these samples would be tested for metals, pH and volaitile organics. At approximately 1630, DHS left the facility. Mr. Peeler maintained the chain of custody from SCC to Southern California Laboratory.

Analyses requested:

1. Metals and pH for all samples.
2. Volatile organics scan on samples SCC08 and SCC12.

Note:

Pictures will be attached when available

Attachments

1. Facility
2. Pictures
3. Sample results
4. Chain of custody sheets

Attachment 1

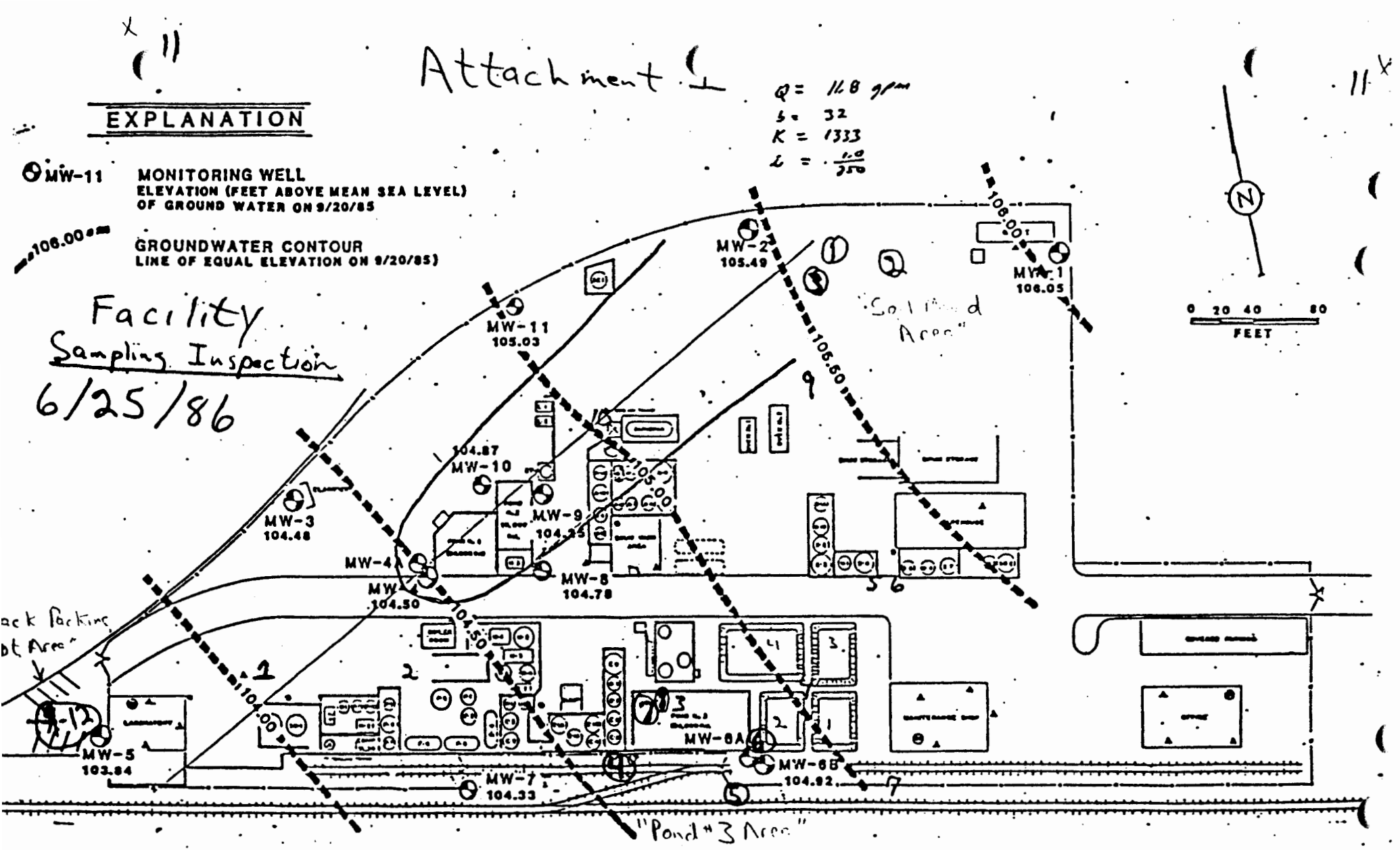
Q = 1.18 gpm
s = 32
K = 1333
i = 1.0/350

EXPLANATION

MW-11 MONITORING WELL
ELEVATION (FEET ABOVE MEAN SEA LEVEL) OF GROUND WATER ON 9/20/85

106.00 GROUNDWATER CONTOUR
LINE OF EQUAL ELEVATION ON 9/20/85)

Facility
Sampling Inspection
6/25/86



J.H. KLEINFELDER & ASSOCIATES GEOTECHNICAL CONSULTANTS • MATERIALS TESTING PROJECT NO. Q 1014-2	SOUTHERN CALIFORNIA CHEMICAL SANTA FE SPRINGS, CA. GROUNDWATER ELEVATION CONTOUR MAP SEPTEMBER 20, 1985	PLAT 2

Attachment 3

Hazardous Materials Unit
Southern California Laboratory Section

Hazardous Materials Management Section
JUL 24 1986
California Department of Health Services
ANGELES

To : Barion Peeler

SCL No. : 3996 To 4

Sampling No : SCC01 To SCC12

Date of Report: 7/23/86

Sample Location: Southern California Chemical Co
8851 Dice Road, Santa Fe Springs 90670

Analytical Procedures Used: PH by PH-meter. Metal concentrations were measured by flame AA on PE 3030.

Analysis Results:

	SCL#	Collector's sample #	PH At 50% Dilution	Cd	Cr	Cu	Ni	Pb	Zn
mound	3996	SCC01	5.7	12 mg/kg	400 mg/kg	1900 mg/kg	120 mg/kg	6000 mg/kg	6100 mg/kg
mound	3997	SCC02	5.9	7.7 "	300 "	1600 "	91 "	8000 "	4200 "
mound	3998	SCC03	6.3	32 "	1400 "	6300 "	470 "	37000 "	26000 " ⊕
tank car	3999	SCC04	4.2	< 5 "	240 "	1500 "	440 "	200 "	420 "
drum pit	4000	SCC05	4.4	5.0 "	360 "	8500 "	1100 "	120 "	800 "
#4 pond	4001	SCC06	6.4	38 "	3300 "	9100 "	730 "	38000 "	25000 " ⊕
#3 ditch	4002	SCC07	7.2 (with no dilution)	< 0.1 mg/L	18 mg/L	65 mg/L	2.3 mg/L	< 0.5 mg/L	0.5 mg/L
#3 ditch	4003	SCC08	—	—	—	—	—	—	—
back lot PK	4004	SCC09	2.8	< 5 mg/kg	760 mg/kg	14000 mg/kg	1200 mg/kg	340 mg/kg	660 mg/kg
"	4005	SCC10	7.0	9.0 "	3400 "	6600 "	290 "	750 "	950 "
"	4006	SCC11	7.4	< 5 "	380 "	16000 "	13 "	11 "	53 "
"	4007	SCC12	7.5	< 5 "	3800 "	1400 "	40 "	160 "	270 "

Analysts' Signatures:

V. Mota Ford — 7/23/86
Date

____
Date

Supervising Chemist's Signature:

F. J. Baumann

State of California—Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. C A D 0 0 8 4 8 8 0 2 5 | Manifest Document No. 0 0 0 1 1 | 2. Page 1 of 2 | Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
Southern California Chemical Co., Inc.
8851 Dice Road, Santa Fe Springs, CA 90670-0118

4. Generator's Phone (213) 698-8036

5. Transporter 1 Company Name: NASH SALVAGE, INC.
6. US EPA ID Number: C A D 9 9 0 8 0 2 9 9 3

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
Casmalia Resources
NTU Road
Casmalia, CA 93429
10. US EPA ID Number: C A D 0 2 0 7 4 8 1 2 5

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solid, N.O.S., ORM-E, NA 9189	1	CM	11	Y
b.				
c.				
d.				

15. Special Handling Instructions and Additional Information
Goggles and glasses worn.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

Printed/Typed Name: PENNY HECKMER | Signature: Penny Heckmer | Date: Month 10 Day 30 Year 86

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: DENNIS KISER | Signature: D A K | Date: Month 10 Day 30 Year 86

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: | Signature: | Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. # 81484 - 28,220 lbs

Printed/Typed Name: Casmalia Resources Alice Brown | Signature: Alice Brown | Date: Month 10 Day 31 Year 86

8460 09823

DHS 8022 A (11/84)
(EPA 8700-22)

YELLOW: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

84 89641

GENERATOR COPY

State of California — Health and Welfare Agency

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAD008488025
Manifest Document No.: 00001
2. Page 1 of 1

Return to Generator

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Southern California Chemical Co., Inc.
8851 Dice Road, Santa Fe Springs, CA 90670-0118

4. Generator's Phone (213) 698-8036

5. Transporter 1 Company Name: Nash Salvage, Inc.
6. US EPA ID Number: CAD 99080299[illegible]

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
Casmalia Resources
NTU Road
Casmalia, CA 93429

10. US EPA ID Number: CAD020748125

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solid, N.O.S., ORM-E, NA 9189	1	CM	11	Y
b.				
c.				
d.				

GENERATOR

J. Additional Descriptions for Materials Listed Above

Copper = 5.[illegible] Chrome +3 = [illegible]
Iron = 1.[illegible] Nickel = 0.00[illegible]
Zinc = 0.[illegible] Ph = [illegible]
Lead Sulfide = 0.05% Balance = [illegible]

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Goggles and glasses worn.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name	Signature	Month Day Year
By: Penny Heckmer	Penny Heckmer	11 11 786

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Robert D McDonald	Robert D McDonald	1 1 1 786

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
	8440	

FACILITY

19. Discrepancy Indication Space

#82643-284016

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Casmalia Resources	Carl Johnson	11 20 86

86269771

DHS 8022 A (11/85)
(EPA 8700—22)

YELLOW: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

ART. # 33

State of California—Health and Welfare Agency

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD00848802[illegible] Manifest Document No. [illegible]

2. Page 1 of 1

Information in the shaded areas is not required by law.

3. Generator's Name and Mailing Address

Southern California Chemical Co., Inc.
8851 Dice Road, Santa Fe Springs, CA 90670-0118

4. Generator's Phone (213) 698-8036

5. Transporter 1 Company Name: Nash Salvage, Inc.

6. US EPA ID Number: CAD990802993

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

Casmalia Resources
NTU Road
Casmalia, CA 93429

10. US EPA ID Number: CAD020748125

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solid, N.O.S., ORM-E, NA 9189	1	CM	11	Y
b.				
c.				
d.				

J. Additional Descriptions for Materials Listed Above

Copper = 6/8[illegible]
Iron = 1.1[illegible]
Zinc = 0.0[illegible]
Lead Sulfide = 0.0[illegible]

15. Special Handling Instructions and Additional Information

Goggles and glasses worn.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: Penny Heckmer — Signature: Penny Heckmer — Month Day Year: 1 2 0 9 8 [illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: FRANCISCO COSS — Signature: Francisco Coss — Month Day Year: 1/12/0/9/86

TRANS # 8512

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

#83355-14,2601bs.

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Casmalia resources Carol Johnston — Signature: Carol Johnston — Month Day Year: 1/12/1/1/86

86269770

DHS 8022 A (11/85)
(EPA 8700—22)

YELLOW: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

State of California — Health and Welfare Agency

SSC 1-6

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD008488025 — Manifest Document No. 000111 — Page 1 of 2

Information in the shaded areas is not required by Federal law.

GENERATION

3. Generator's Name and Mailing Address
Southern California Chemical Co., Inc.
8851 Dice Road, Santa Fe Springs, CA 90670-0118

4. Generator's Phone (213) 698-8036

5. Transporter 1 Company Name: Nash Salvage, Inc.
6. US EPA ID Number: CAD990802993

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
Casmalia Resources
NTU Road
Casmalia, CA 93429
10. US EPA ID Number: CAD020748125

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. Hazardous Waste Solid, N.O.S., ORM-E, NA 9189	1	CM	11	Y
b.				
c.				
d.				

[redacted]

84609837

15. Special Handling Instructions and Additional Information
Wear goggles + gloves.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

Printed/Typed Name: Penny Heckmer — Signature: Penny Heckmer — Date: Month Day Year 10 [illegible] 86

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: FRED E. OSBURN — Signature: F.E. Osburn — Date: Month Day Year 10 [illegible] 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Date: Month Day Year

8103

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. # 80064
Printed/Typed Name: Casmalia Resources — Signature — Date: Month Day Year 10 [illegible] 86

DHS 8022 A (11/84)
(EPA 8700-22)

YELLOW: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS #2

84 69641

RECORDS SEPARATOR PAGE

4E

PHIBRO-TECH, INC.

June 30, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Mark Pumford
Los Angeles Regional Board
101 Centre Plaza Drive
Monterey Park, CA 91754-2156

Dear Mr. Pumford:

Enclosed is our 1993 Annual Storm Water Report. Please contact me if there are any questions.

Please note that our name has been changed to Phibro-Tech, Inc.

Sincerely,

E. E. Vigil
Environmental and Safety Manager

EEV/pwc:ltrpumfo
enclosures

8851 DICE ROAD SANTA FE SPRINGS, CALIFORNIA 90670 (310) 698-8036 (213) 723-1614 (714) 521-7960 FAX (310) 698-1921

State of California
STATE WATER RESOURCES CONTROL BOARD

ANNUAL REPORT
FOR
STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITIES
1993-1994

94 JUL -1 PM 1:43

An annual report is required to be submitted to your local Regional Water Quality Control Board (Regional Board) by July 1 of each year. This document must be certified and signed, under penalty of perjury, by the appropriate official of your company that the information provided in this report is true and complete (see Section C.9 of the General Permit). Retain a copy of the completed Annual Report for your records.

Many of the Annual Report questions, when answered "NO", require an explanation. Please provide explanations on a separate sheet as an attachment. As necessary, include a discussion of what actions have or will be taken to bring the facility into compliance along with a time schedule for implementation of planned actions. If convenient, you may provide a single sketch or site plan that combines the sketch or site plan requirements under items 6, 7, 8, and 9(c) on pages 3 and 4.

If any information contained in Items A, B, and C below is incorrect, please cross out or highlight the incorrect information (do not white out or erase) and provide the correct information next to or above the incorrect information.

If you have any questions, please contact your Regional Board Storm Water Program Contact. The address of your Regional Board (where the Annual Report must be filed) along with the name and telephone number of the contact person is indicated below.

LOS ANGELES REGIONAL BOARD
101 CENTRE PLAZA DR.
MONTEREY PARK, CA 94754-2156

Contact: MARK PUMFORD
Tel: (213) 266-7500

GENERAL INFORMATION

A. FACILITY WDID NO: 4B19S001265

B. OWNER/OPER: **Name:** ~~CP CHEMICALS~~ Phibro-Tech, Inc. **Contact:** ~~CONTACT NAME MISSING~~ Tom Moran

Address: ONE PARKER PLAZA, FORT LEE, NJ 07024 **Tel:** (201) 944-6020

C. FACILITY INFO: **Name:** ~~ENTECH RECOVERY INC.~~ Phibro-Tech, Inc. **Contact:** E.E. VIGIL

Address: 8851 DICE RD, SANTA FE SPRINGS, CA 90670 **Tel:** (310) 698-8036

Regulated Activity: CHEMICAL MFG. AND RECYCLING **SIC Code(s):** 2819 - Industrial Inorganic Chemicals, not elsewhere classified

State of California
STATE WATER RESOURCES CONTROL BOARD

ANNUAL REPORT

FOR
STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITIES
1993-1994

GENERAL INFORMATION (CONTINUED)

D. Is your facility part of a Group Monitoring Plan?

___Yes__X__No
If Yes, please answer the following questions:

- What is the Group Monitoring Plan's name:_____

- Is your facility designated to collect storm water samples?

___Yes ___No

E. Is your facility exempt from sample collection (Section B.9. of the General Permit)?

___Yes __X__No
If Yes, which of the following apply (check one):

__ Submitted Self Certification to Regional Board. Date Submitted:_____

__ Received certification of local agency.

__ Received exemption by the Regional Board.

Attach, as appropriate, the first page of either the submitted self certification, the local agency certification letter, or the Regional Board exemption letter.

State of California
STATE WATER RESOURCES CONTROL BOARD

ANNUAL REPORT
FOR
STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITIES
1993-1994

SPECIFIC INFORMATION

1. Have you prepared a Storm Water Pollution Prevention Plan (SWPPP) as required in Section A of the Permit?

   ____Yes __X__No If No, attach explanation.

2. Have you implemented all elements of your SWPPP?

   ____Yes __X__No If No, attach explanation.

3. a. Have all non-storm water discharges (see page 10 for examples) been permitted or eliminated (Section A.6)?

   __X__Yes ____No
   If No, describe the non-storm water discharges that have not been permitted or eliminated.

   b. Have you reported all non-storm water discharges described above to the appropriate Regional Board office?

   ____Yes ____No If No, attach report (see page 10 for instructions).
   If Yes, attach a copy of the first page of the previously submitted report.

   c. Does your SWPPP include Best Management Practices (BMPs) that address existing non-storm water discharges described above?

   __X__Yes ____No
   If No, revise your SWPPP and attach a brief description of the revisions.

4. Have you developed a monitoring program as required in Section B of the Permit?

   __X__Yes ____No If No, attach explanation.

5. Have you implemented all the elements of your monitoring plan?

   __X__Yes ____No If No, attach explanation.

6. Did you conduct an annual site inspection (Section B.5a)?

   __X__Yes ____No If No, attach explanation.
   If Yes, attach a sketch or site plan of the facility showing areas inspected and provide the following for each area inspected: (you may use FORM 1 to report findings)
   - Date and time of inspection.
   - Name and title of inspector.
   - Summary of inspection findings. Evaluate if BMPs, as identified in the SWPPP, are in place and if additional BMPs are needed. Discuss corrective actions that are necessary.

State of California
STATE WATER RESOURCES CONTROL BOARD

ANNUAL REPORT
FOR
STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITIES
1993-1994

SPECIFIC INFORMATION (CONTINUED)

7. Did you conduct at least one wet weather visual observation per month (Section B.5c)?

   X Yes ___No If No, attach explanation.
   Attach a sketch or site plan of the facility showing the discharge locations observed, and provide the following information for each location: (You may use FORM 2 to report findings)
   - Date and time of observation.
   - Name and title of inspector.
   - Storm water flow characteristics observed. For example was the flow discolored, very turbid; did it have an odor, evidence of floating or suspended material; did it have a sheen; or any other unusual characteristics? If any were observed, discuss the corrective actions taken or to be taken.

8. Did you conduct at least two dry season visual observations (Section B.5.b)?

   X Yes ___No If No, attach explanation.
   Attach a sketch or site plan of the facility showing the locations inspected, and provide the following for each location: (You may use FORM 3 to report observations)
   - Date and time of observation.
   - Name and title of inspector.
   - Observations of non-storm water flow or indications of prior non-storm water flow. Describe the flow characteristics, i.e. odor, color, etc., and possible source of flow, and corrective action taken. If no action has been taken, discuss what and when actions will be taken to eliminate the non-storm water discharge. Report these discharges in Item 3 above.

9. a. Did you collect storm water samples from at least two different storm events (Section B.5.d)?

   X Yes ____No If No, attach explanation.

   b. Did you collect samples from all storm water discharge points (Section B.11)?

   ___Yes X No
   If No, have you documented in your monitoring program that the storm water discharges from different locations are substantially identical?

   X Yes ____No
   If No, revise your Monitoring Program and attach a brief description of the revisions.

   c. How many storm water discharge points does your facility have? 2

   Attach a sketch or site plan of the facility showing all storm water discharge points. If you did not sample all discharge points, indicate which discharge points were and were not sampled.

   d. Were all samples collected no more than 30 minutes after the storm water discharge began (Section B.12)?

   ___Yes X No If No, attach explanation.

State of California
STATE WATER RESOURCES CONTROL BOARD

ANNUAL REPORT

FOR

STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES

1993-1994

SPECIFIC INFORMATION (CONTINUED)

10. Provide a summary of your sampling results. You may use FORM 4 to report findings. The summary should include the date and time of sample, constituents tested, who did the testing, the testing results, test method used, and test detection limit. Copies of the analytical results from the laboratory may also be provided, but are not required. For facilities subject to Federal Storm Water Effluent Limitation Guidelines, seperately report the Federal Guidelines and the corresponding monitoring results.

11. Attach an evaluation of the over-all effectiveness of the facility's SWPPP in reducing pollutants in storm water discharge. Consider the results of sampling and visual observation in this evaluation. Discuss specific areas or elements of the SWPPP that are not effective or need improvement. Provide a brief description of alternatives or proposed revisions to the SWPPP.

12. Attach an evaluation of your monitoring program in detecting pollutants in storm water discharge. Discuss areas of the monitoring program that are not effective or need improvement. Provide a brief description of proposed revisions to the monitoring program.

13. Do you certify that, based on your annual site inspection, your facility is in compliance with the requirements of the General Industrial Activities Storm Water Permit?

X Yes ____ No If No, attach explanation.

CERTIFICATION

I am duly authorized to sign reports required by the GENERAL INDUSTRIAL ACTIVITIES STORM WATER PERMIT (see Provisions C. 9) and I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name: E. E. Vigil

Signature: E E Vigil Date: 6/30/94

Title: Environmental & Safety Manager

State of California
STATE WATER RESOURCES CONTROL BOARD

ANNUAL REPORT
FOR
STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITIES
1993-1994

FORM 1 - ANNUAL SITE INSPECTION FORM

Inspection Date: 5/16/94

INSPECTED AREAS List all areas where exposed loading/unloading, access, storage, manufacturing or process activities occur.	For each area, are the BMPs listed in the SWPPP in place?		Are additional BMPs needed to control storm water pollution?		DESCRIBE DEFICIENCIES AND CORRECTIVE ACTIONS
	YES	NO	YES	NO	
Yard	x		x		Additional paving & redirection of stormwater flow needed from remaining unpaved areas.
Copper Oxide	x			x	
Copper Sulfate	x			x	
Ferric Chloride	x			x	
Metal Recovery	x			x	
ERS Areas	x			x	
Maintenance	x			x	
Wastewater	x			x	

Inspector Name: E. E. Vigil Title: Environmental & Safety Manager

Signature: E. E. Vigil Date: 5/16/94

State of California
STATE WATER RESOURCES CONTROL BOARD

ANNUAL REPORT
FOR
STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITIES
1993-1994

FORM 2 - RECORD OF WET SEASON VISUAL OBSERVATIONS

- Wet season observations are required to be done during the first hour of discharge for at least one storm per month between October 1 and April 30.

Month: January 1994 Approximate time storm water discharge began: A.M.

DISCHARGE LOCATION	DATE/ TIME	DISCHARGE OBSERVATIONS (CIRCLE ALL THAT APPLY)		DESCRIBE DISCHARGE	DESCRIBE SOURCE OF DISCHARGE
Railroad Gate(s)	1/25/94 9:00 A.M.	Floating Materials?	Suspended materials?	Clear - minimum flow	Along R.R. tracks from rain
		Odors?	Oil/grease sheen?		
		Discolorations?	Cloudiness?		

Comments/Corrective Actions Taken for above:

DISCHARGE LOCATION	DATE/ TIME	DISCHARGE OBSERVATIONS (CIRCLE ALL THAT APPLY)		DESCRIBE DISCHARGE	DESCRIBE SOURCE OF DISCHARGE
Railroad Gate(s)	2/8/94 10:30 A.M.	Floating Materials?	Suspended materials?	Clear - minimum flow	Along R.R. tracks from rain
		Odors?	Oil/grease sheen?		
		Discolorations?	Cloudiness?		

Comments/Corrective Actions Taken for above:

Inspector Name: E. E. Vigil Title: Environmental & Safety Manager

Signature: E E Vigil Date:

State of California
STATE WATER RESOURCES CONTROL BOARD

ANNUAL REPORT

FOR
STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITIES
1993-1994

FORM 3 - RECORD OF DRY SEASON VISUAL OBSERVATIONS

- Dry season visual observations are required to detect the presence of non-storm water discharges.
- This form should be filled out for at least two dry season visual observations between May 1 and September 30 of each year.
- Non-storm water discharges that have not been eliminated must be reported in Item 3 of the Annual Report.

DISCHARGE LOCATION	DATE/ TIME	DISCHARGE OBSERVED? YES / NO X	DESCRIBE OBSERVATIONS	DESCRIBE SOURCE OF DISCHARGE
Railroad Gate(s)	4/21/94 1:00 P.M.	INDICATIONS OF PRIOR DISCHARGE? YES / NO X	No flow	

omments/Corrective Actions Taken for above:

DISCHARGE LOCATION	DATE/ TIME	DISCHARGE OBSERVED? YES / NOX	DESCRIBE OBSERVATIONS	DESCRIBE SOURCE OF DISCHARGE
Railroad Gate(s)	5/16/94 1:00 P.M.	INDICATIONS OF PRIOR DISCHARGE? YES / NOX	No flow	

omments/Corrective Actions Taken for above:

Inspector Name: E. E. Vigil Title: Environmental & Safety Manager

Signature: E E Vigil Date:

State of California
STATE WATER RESOURCES CONTROL BOARD

ANNUAL REPORT
FOR
STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITY
1993-1994

FORM 4
SAMPLING RESULTS

DISCHARGE POINT: Railroad Gate - E

DATE AND TIME OF SAMPLE: 1/25/94 TIME DISCHARGE STARTED: A.M.

CONSTITUENT TESTED	TESTED BY: LAB/SELF[1]	RESULTS [2]	TEST METHOD USED[3]	DETECTION LIMIT
pH	Lab	5.9 (pH UNITS)	150.1	NA
TOTAL SETTLEABLE SOLIDS	Lab	ND mg/l	160.2	20.0
SPECIFIC CONDUCTANCE	Lab	438 umho/cm	9050	1.0
OIL & GREASE	—	— mg/l	—	—
TOTAL ORGANIC CARBON	Lab	14 mg/l	415.1	1.0
ADDITIONAL POLLUTANTS:				
Copper	Lab	7.3 mg/L	200.7	0.02
Zinc	Lab	1.3 mg/L	200.7	0.02
Nickel	Lab	0.81 mg/L	200.7	0.04
Lead	Lab	0.17 mg/L	239.2	0.05
FLOW [4]		gallons		
SIZE OF STORM (IF AVAILABLE)		inches		

(1) If testing was done by a certified laboratory, indicate "lab"; otherwise, indicate "self".
(2) If analytical results indicate a value less then the detection limit (or non detect), show the value as less than the numerical value of the detection limit.
(3) Indicate the test method used to determine result. In cases where analyzers are used, indicate with an "A"
(4) Dischargers subject to the Santa Clara County General Permit are required to provide estimates or calculations of the volume of storm water discharged from each point. Describe, on a separate sheet, how the flow measurement was calculated.

Name of person collecting sample: E. E. Vigil Title: Env. & Safety Manager

State of California
STATE WATER RESOURCES CONTROL BOARD

ANNUAL REPORT
FOR
STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITY
1993-1994

FORM 4
SAMPLING RESULTS

DISCHARGE POINT: Railroad Gate - E

DATE AND TIME OF SAMPLE: 2/8/94 - 10:30 A.M. TIME DISCHARGE STARTED: A.M.

CONSTITUENT TESTED	TESTED BY: LAB/SELF[1]	RESULTS [2]	TEST METHOD USED[3]	DETECTION LIMIT
pH	Lab	6.4 (pH UNITS)	150.1	NA
TOTAL SETTLEABLE SOLIDS	Lab	ND mg/l	160.2	20.0
SPECIFIC CONDUCTANCE	Lab	264 umho/cm	9050	1.0
OIL & GREASE	--	-- mg/l	--	--
TOTAL ORGANIC CARBON	Lab	9.2 mg/l	415.1	1.0
ADDITIONAL POLLUTANTS:				
Copper	Lab	1.7 mg/L	200.7	0.02
Lead	Lab	0.12 mg/L	239.2	0.025
Nickel	Lab	0.22 mg/L	200.7	0.04
Zinc	Lab	0.38 mg/L	200.7	0.02
FLOW [4]		gallons		
SIZE OF STORM (IF AVAILABLE)		inches		

(1) If testing was done by a certified laboratory, indicate "lab"; otherwise, indicate "self".
(2) If analytical results indicate a value less than the detection limit (or non detect), show the value as less than the numerical value of the detection limit.
(3) Indicate the test method used to determine result. In cases where analyzers are used, indicate with an "A"
(4) Dischargers subject to the Santa Clara County General Permit are required to provide estimates or calculations of the volume of storm water discharged from each point. Describe, on a separate sheet, how the flow measurement was calculated.

Name of person collecting sample: E. E. Vigil Title: Env. & Safety Manager

State of California
STATE WATER RESOURCES CONTROL BOARD

ANNUAL REPORT
FOR
STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITY
1993-1994

SUPPLEMENTAL QUESTIONNAIRE (OPTIONAL)

We have received over 8000 NOIs for coverage under the STATEWIDE INDUSTRIAL GENERAL PERMIT. We have tried to make the program understandable and provide a workable means of implementing a complex set of new regulations. You may wish to spend a few minutes answering the following questions to tell us how we are doing.

You may send this form with your annual report. If you wish to submit it anonymously, please submit it separately.

1. Do you understand the GENERAL PERMIT and what it requires you to do?

   X Yes ____ No

2. Do you consider the GENERAL PERMIT an efficient and workable means to comply with the Clean Water Act and the Storm Water Permitting Regulations?

   X Yes ____ No

3. Have you had any contact (inspections, informational workshops, telephone inquiries) with staff of the Regional Water Boards or your local storm water management agency?

   ____ Yes X No

   If Yes, please indicate the type of contact made, and the date (if available) it was made. You may also wish to discuss the context in which the contact was made and if you were satisfied with the help or guidance received in response to your inquiry.

4. Did you (or your accounting office) understand the last ANNUAL FEE INVOICE ?

   X Yes ____ No ____ DID NOT RECEIVE INVOICE

5. Please use the space provided below (or an attachment) to suggest ways that we can improve and/or streamline our management of this program, or explain your responses made to the preceding questions.

PHIBRO-TECH, INC.
8851 DICE ROAD
SANTA FE SPRINGS, CA 90670

1993 ANNUAL STORM WATER REPORT

Brief explanation for questions answered with a NO response that require additional information.

General owner/facility information

B. The owner of our facility is now Phibro-Tech, Inc. - a name change only, effective in January, 1994.

C. The name of our facility has been changed to Phibro-Tech, Inc. also.

Annual Report - Specific Information

1. A Storm Water Pollution Plan has been drafted and is being finalized.

2. Several proposed elements of the plan will require approval from other regulatory agencies. The necessary approvals are being pursued.

9.b Due to inadequate storm water runoff, only one of the two proposed sampling points was sampled.

9.c Samples were collected as soon as possible after storm commenced and when safe to collect samples.

11. Our facility has had a long standing policy of storing and beneficially reusing all storm water possible. This policy continued in effect this year and was supplemented by rental of additional storage tanks for storm water to allow beneficial reuse in plant processes. The two remaining unpaved areas of the plant will be paved and the rainwater directed to storage when the other necessary agency approvals are obtained.

12. The monitoring program is effective in detecting pollutants in storm water discharge. No changes are proposed to the monitoring program.

RECORDS SEPARATOR PAGE

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RECORDS SEPARATOR PAGE

David Rasmussen

SOUTHERN CALIFORNIA LABORATORY
HAZARDOUS MATERIALS UNIT
1449 W. TEMPLE STREET, LOS ANGELES
TEL: 213 620-3376

SEP 17 1990

NARRATIVE

1. THIS ANALYTICAL REPORT PACKAGE WAS PREPARED FOR SCL SAMPLES 9111 - 9115

2. SAMPLE MATRIX TYPE WAS SOIL

3. SAMPLES WERE COLLECTED ON 08/16/90 AT SOUTHERN CALIFORNIA CHEMICAL CO.

4. COLLECTOR'S NAME ON THE SAMPLE ANALYSIS REQUEST FORM IS DAVID RASMUSSEN

5. SAMPLES WERE :

   RECEIVED ON 08/24/90

   EXTRACTED ON 09/11/90

   ANALYZED ON 09/12/90 BY EPA METHOD 418.1,SCL 418

   DATA PACKAGE WAS COMPLETED ON 09/13/90

6. NO MAJOR PROBLEMS WERE ENCOUNTERED DURING THE COURSE OF THESE ANALYSES.

7. ALL QC PARAMETERS WERE WITHIN ESTABLISHED CONTROL LIMITS.

8. HOLDING TIMES WERE MET.

9. INSTRUMENT INITIAL CALIBRATION & CONTINUING CALIRATION CRITERIA WAS MET.

SOUTHERN CALIFORNIA LABORATORY
HAZARDOUS MATERIALS UNIT
1449 W. TEMPLE STREET, LOS ANGELES
TEL: 213 620-3376

INDEX
[EPA 418.1 FOR SCL 9111-9115]

TOTAL PAGES = 5

State of California-Health and Welfare Agency — Department of Health Services

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

All applicable items must be completed

1. HML No. To SCG189 | 2. Page 1 of 1

3. Collector/Address David Rasmussen, 1405 N. San Fernando Blvd. Burbank 91504

4. Phone 818/567-3124

5. Priority ☐ a. Authorized by 3

6. Date Sampled August 16, 1990 7. Time Sampled 11:30 Hours

8. Codes (fill in all applicable codes)

a. STC	3040
b. Region	3
c. TPC	
d. INDEX	7040
e. PCA	34000
f. SITE	
g. County	03

9. Activity ☑ Enf ☐ Surv ☐ Site Mit ☐ Permitting ☐ Alt Tech ☐ Other

10. SAMPLING LOCATION a. EPA ID No. CAD008148025

b. Site Southern California Chemical Co.

c. Address 8851 Dice Road, Santa Fe Springs
Number Street City Zip

11. SAMPLES

a. ID	b. Collector's No.	c. HML No.	d. Type	e. Container Type	f. Container Size	g. Field Information
A.	SCGJF1	9111	Soil	Glass	500ml	Underground tank excavation - NW corner
B.	SCGJF2	9112	Soil			NE corner
C.	SCGJF3	9113	Soil			SE corner
D.	SCGJF4	9114	Soil			large pile NE corner
E.	SCGJF5	9115	Soil			West side
F.	SCGJF6	9116	Soil			Wet Parking Lot 9 Feet west facility fence 4 ft S. / 48 ft W
G.	SCGJF7	9117	Soil	↓	↓	
H.						

12. ANALYSIS REQUESTED

a. ☐ pH
b. ☑ Metal Scan A-G
c. ☐ Metals (Spec)
d. ☐ W.E.T.
f. ☑ PCB A-G
g. ☐ VOA
h. ☐ PAH
i. ☐ Phenols
j. ☐ Carbamates
k. ☐ Ext. Org (Screeng)
l. ☐ Chlorinated Pesticides
m. ☐ Organo-P Pesticides
n. ☑ TAT A-E
o. ☐

13. CHAIN OF CUSTODY

	Signature	Name/Title	Inclusive Dates
a.	David Rasmussen	David Rasmussen HazMat Spec	8/16/90 - 8/24/90
b.			/ / - / /
c.			/ / - / /
d.			/ / - / /

14. SPECIAL REMARKS

15. RECEIVED BY [signature] a. Title PHC II b. Date 8/24/90

16. SAMPLE ALLOCATION a. ☐ HML-Berkeley b. ☐ HML-SC c. ☐ AIHL d. ☐ Contract b. Date

17. ANALYSIS REQUESTED

FIELD

LAB

Southern California Laboratory Section - Hazardous Materials Unit
1449 Temple Street Los Angeles Ca. 90026
Telephone 213-620-3376

4

Collector's Name: DAVID RASMUSSEN

SCL No. : 9111 - 9115

Date Reported : 09/13/90

Sample Location : SOUTHERN CALIFORNIA CHEMICAL CO.
8851 DICE ROAD, SANTA FE SPRINGS

Analytical Procedures Used : EPA 418.1, SCL 418

Analysis Results

SCL NO.	COLLECTOR'S NO.	TOTAL PETROLEUM HYDROCARBONS mg/kg
9111	SCCJF-1	390
9112	SCCJF-2	920
9113	SCCJF-3	3300
9114	SCCJF-4	440
9115	SCCJF-5	580

Analyst's Signature:
Monina Ligao 9/13/90
MONINA LIGAO Date

Supervising Chemist's Signature:
Russ Chin 9/14/90
RUSS CHIN Date

RECORDS SEPARATOR PAGE

SOUTHERN CALIFORNIA LABORATORY
HAZARDOUS MATERIALS UNIT
1449 W. TEMPLE STREET, LOS ANGELES
TEL: 213 620-3376

SEP 26 1990

NARRATIVE

1. THIS ANALYTICAL REPORT PACKAGE WAS PREPARED FOR SCL SAMPLES 9111 - 9117

2. SAMPLE MATRIX TYPE(S) SOIL

3. SAMPLES WERE COLLECTED ON 08/16/90 AT SOUTHERN CALIFORNIA CHEMICAL CO

4. COLLECTOR'S NAME ON THE SAMPLE ANALYSIS REQUEST FORM IS DAVID RASMUSSEN

5. SAMPLES WERE :

   RECEIVED ON 08/24/90

   EXTRACTED ON 09/11/90 - 09/13/90 BY EPA METHOD 3540 (SOXHLET EXTRACTION).

   CLEANED UP ON 09/13/90 - 09/17/90 BY EPA METHOD 3620 (FLORISIL COLUMN CLEAN UP)

   ANALYZED ON 09/18/90 - 09/19/90 BY EPA METHOD 8080 (PCB ANALYSIS)

   DATA PACKAGE WAS COMPLETED ON 09/21/90.

6. NO MAJOR PROBLEMS WERE ENCOUNTERED DURING THE COURSE OF THESE ANALYSES.

7. ALL QC PARAMETERS WERE WITHIN ESTABLISHED CONTROL LIMITS.

8. HOLDING TIMES WERE MET.

9. INSTRUMENT INITIAL CALIBRATION & CONTINUING CALIBRATION CRITERIA WERE MET.

SOUTHERN CALIFORNIA LABORATORY
HAZARDOUS MATERIALS UNIT
1449 W. TEMPLE STREET, LOS ANGELES
TEL: 213 620-3376

INDEX
(EPA 8080 FOR SCL 9111-9117)

TOTAL PAGES = 6

State of California Health and Welfare Agency — Department of Health Services

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

All applicable items must be completed

1. HML No. To SCG189
2. Page 1 of 1

3. Collector/Address: David Rasmussen, 1405 N. San Fernando Blvd. Burbank 91504
4. Phone: 818 567-3124
5. Priority ☐ 3
   a. Authorized by

6. Date Sampled: August 16, 1990
7. Time Sampled: 11 30 Hours

8. Codes (fill in all applicable codes)
   - a. STC: 3040
   - b. Region: 3
   - c. TPC:
   - d. INDEX: 7040
   - e. PCA: 34000
   - f. SITE:
   - g. County: 031

9. Activity: ☑ Enf ☐ Surv ☐ Site Mit ☐ Permitting ☐ Alt Tech ☐ Other

10. SAMPLING LOCATION
   - a. EPA ID No.: CAD008488025
   - b. Site: Southern California Chemical Co.
   - c. Address: 8851 Dice Road, Santa Fe Springs (Number / Street / City / Zip)

11. SAMPLES

a. ID	b. Collector's No.	c. HML No.	d. Type	e. Container Type	f. Container Size	g. Field Information
A.	SCCJF1	9111	Soil	Glass	500ml	Underground tank excavation - NW corner
B.	SCCJF2	9112	Soil	↓	↓	NE corner
C.	SCCJF3	9113	Soil	↓	↓	SE corner
D.	SCCJF4	9114	Soil	↓	↓	large pile NE corner
E.	SCCJF5	9115	Soil	↓	↓	West side
F.	SCCJF6	9116	Soil	↓	↓	Wet Parking lot 9 feet west Facility fence
G.	SCCJF7	9117	Soil	↓	↓	4 ft S. / 48 ft W
H.						

12. ANALYSIS REQUESTED
   - a. ☐ pH
   - b. ☑ Metal Scan: A-G
   - c. ☐ Metals (Spec)
   - d. ☐ W.E.T.
   - f. ☐ [redacted]
   - g. ☐ VOA
   - h. ☐ PAH
   - i. ☐ Phenols
   - j. ☐ Carbamates
   - k. ☐ Ext. Org (Screeng)
   - l. ☐ Chlorinated Pesticides
   - m. ☐ Organo-P Pesticides
   - n. ☑ TAH A-E
   - o. ☐

13. CHAIN OF CUSTODY

	Signature	Name/Title	Inclusive Dates
a.	David Rasmussen	David Rasmussen HazMat Spec.	8/16/90 - 8/24/90
b.			/ / - / /
c.			/ / - / /
d.			/ / - / /

FIELD

14. SPECIAL REMARKS

15. RECEIVED BY: [signature] a. Title: PHC III b. Date: 8/24/90

16. SAMPLE ALLOCATION: a. ☐ HML-Berkeley b. ☐ HML-SC c. ☐ AIHL d. ☐ Contract b. Date

17. ANALYSIS REQUESTED

LAB

Laboratory Report
Southern California Laboratory - Hazardous Materials Unit
1449 W. Temple Street, Los Angeles
Telephone 213-620-3376

Collector's Name: DAVID RASMUSSEN

SCL NO.: 9111 - 9117

Sample Location : SOUTHERN CALIFORNIA CHEMICAL CO
8851 DICE ROAD
SANTA FE SPRING

Date Reported : 09/24/90

Analytical Procedures Used: EPA 8080 FOR ANALYSIS
EPA 3540 SOXHLET EXTRACTION
EPA 3620 FLORISIL COLUMN CLEAN-UP

PCBs ANALYSIS

									QUANTITATION LIMIT		
	SCL NO.	9111	9112	9113	9114	9115	9116	9117	9111-9115	9116	9117
	COL.NO.	SCCJF-1	SCCJF-2	SCCJF-3	SCCJF-4	SCCJF-5	SCCJF-6	SCCJF-7			
	MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
ANALYTE	UNITS	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/Kg	mg/kg
PCB 1016 CAS 12674-11-2		ND	ND	ND	ND	ND	ND	ND	0.5	5.0	2.5
PCB 1221 CAS NO. 11104-28-2		ND	ND	ND	ND	ND	ND	ND	0.5	5.0	2.5
PCB 1232 CAS NO. 11141-16-5		ND	ND	ND	ND	ND	ND	ND	0.5	5.0	2.5
PCB 1242 CAS NO. 53469-21-9		ND	ND	ND	ND	ND	ND	ND	0.5	5.0	2.5
PCB 1248 CAS NO. 12672-29-6		ND	ND	ND	ND	ND	ND	ND	0.5	5.0	2.5
PCB 1254 CAS NO. 11097-69-1		ND	ND	ND	ND	ND	ND	ND	0.5	5.0	2.5
PCB 1260 CAS NO. 11096-82-5		1.1	0.5	1.8	3.4	2.9	62	25	0.5	5.0	2.5
PCB 1262 CAS NO. 37324-23-5		ND	ND	ND	ND	ND	ND	ND	0.5	5.0	2.5

Note: ND = Not Detected
QUANTITATION LIMIT = (CONCENTRATION OF LOWEST CALIBRATION STANDARD) TIMES (DILUTION FACTOR)

Sample Preparation: Lucia Yap 9/25/90
LUCIA YAP Date

Analyst: Lucia Yap 9/25/90
LUCIA YAP Date

Supervising Chemist: Russ Chin 9/25/90
RUSS CHIN Date

QUALITY CONTROL (QC) REPORT
SOUTHERN CALIFORNIA LABORATORY - HAZARDOUS MATERIALS UNIT
1449 W. TEMPLE STREET, CA 90026
TEL: 213 620-3376

COLLECTOR'S NAME: DAVID RASMUSSEN
SAMPLING LOCATION: SOUTHERN CALIFORNIA CHEMICAL CO,8851 DICE ROAD,SANTA FE SPRINGS
ANALYTICAL BATCH LAB ID NO.: SCL 9111 - 9117

DATE SAMPLE RECEIVED: 08/24/90
DATE SAMPLE PREPARED: 09/11/90 - 09/17/90
DATE SAMPLE ANALYZED: 09/18/90 - 09/19/90

ANALYTICAL PROCEDURES USED: EPA METHOD 8080 GC/ECD FOR PCB ANALYSIS
EPA METHOD 3540 SOXHLET EXTRACTION
EPA METHOD 3620 FLORISIL COLUMN FOR CLEAN-UP

QC SUMMARY FOR

A: METHOD BLANK
B: METHOD STANDARD RECOVERY
C: LABORATORY CONTROL SAMPLE - SOIL MATRIX WITH PCB 1260 WAS ANALYZED
D: SAMPLE DUPLICATE ANALYSIS

	A	B		C		D			
		METHOD STANDARD		LABORATORY CONTROL SAMPLE		DUPLICATE SAMPLE ANALYSIS Performed on SCL 9113 Matrix SOIL			
	METHOD BLANK	RECOVERY	CONTROL LIMIT	Found	Control limit		RUN 1	Run 2	RPD
COMPOUND	mg/kg	%	%	mg/kg	mg/kg		mg/kg	mg/kg	%
PCB 1016	<0.5	NA				PCB 1260	1.80	1.82	1.1
PCB 1221	<0.5	NA							
PCB 1232	<0.5	NA							
PCB 1242	<0.5	NA							
PCB 1248	<0.5	NA							
PCB 1254	<0.5	NA							
PCB 1260	<0.5	100.8	80 - 120	12.4	11.0-16.3				
PCB 1262	<0.5	NA						CONTROL LIMIT	<20

NOTE : NA = not analyzed

SAMPLE PREPARATION

Lucia Yap 9/25/90

LUCIA YAP DATE

ANALYST

Lucia Yap 9/25/90

LUCIA YAP DATE

SUPERVISING CHEMIST

Russ Chin 9/25/90

RUSS CHIN DATE

QUALITY CONTROL (QC) REPORT
SOUTHERN CALIFORNIA LABORATORY - HAZARDOUS MATERIALS UNIT
1449 W. TEMPLE STREET, CA 90026
TEL: 213 620-3376

LECTOR'S NAME: DAVID RASMUSSEN — DATE SAMPLE RECEIVED:08/24/90
LING LOCATION: SOUTHERN CALIFORNIA CHEMICAL CO,8851 DICE ROAD,SANTA FE SPRINGS
ICAL BATCH LAB ID NO.: SCL 9111 - 9117 — DATE SAMPLE PREPARED:09/11/90 - 09/17/90
ICAL PROCEDURES USED: EPA METHOD 8080 GC/ECD FOR ANALYSIS — DATE SAMPLE ANALYZED:09/18/90 - 09/19/90
EPA METHOD 3540 SOXHLET EXTRACTION
EPA METHOD 3620 FOR CLEAN UP

QC SUMMARY FOR
MATRIX SPIKE(MS)/MATRIX SPIKE DUPLICATE(MSD) PERCENT RECOVERY

RIX SPIKE PERFORMED ON SCL 9113 — TYPE OF MATRIX SOIL — TYPE OF PCB SPIKED PCB 1260

UND	AMOUNT OF ANALYTE IN SAMPLE	AMOUNT ANALYTE ADDED	MATRIX SPIKE		MATRIX SPIKE DUPLICATE		AVE	CONTROL LIMITS FOR % REC	R & D BETWEEN MS/MSD	CONTROL LIMITS FOR RPD
			AMOUNT RECOVERED	% REC	AMOUNT RECOVERED	% REC	% REC			
	mg/kg	mg/kg	mg/kg	%	mg/kg	%	%	%	%	%
1260	1.8	100	101.0	99.2	99.5	97.7	98.5	68.0-123	1.5	<20

SAMPLE PREPARATION — ANALYST — SUPERVISING CHEMIST

Lucia Yap 9/25/90 — Lucia Yap 9/25/90 — Russ Chin 9/25/90

LUCIA YAP DATE — LUCIA YAP DATE — RUSS CHIN DATE

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ATTACHMENT A

AUGUST
MONTHLY WORK SUMMARY
SURFACE SOIL SAMPLING
RFI INVESTIGATION
SOUTHERN CALIFORNIA CHEMICAL

SAMPLING LOCATION	DATE	DEPTHS SAMPLED (feet)	NUMBER ANALYTICAL SAMPLES
HB-RR1	8/22/90	1 - 2	1: 6010/pH
HB-RR2	8/22/90	1 - 2	1: 6010/pH
HB-RR3	8/22/90	1 - 2	1: 6010/pH
HB-RR4	8/22/90	1 - 2	1: 6010/pH
HB-RR5	8/22/90	1 - 2	1: 6010/pH 1: 8240/TOC
HB-RR6	8/22/90	1 - 2	1: 6010/pH
WMU 46 C	8/22-8/23/90	1 - 2	1: 6010/pH 1: 8240/TOC
		3 - 4	1: 6010/pH
		5 - 6	1: 6010/pH
WMU 46D	8/23/90	1 - 2	1: 6010/pH

CDM 8/90

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SOUTHERN CALIFORNIA CHEMICAL
RCRA FACILITY INVESTIGATION
PROFILE LOCATIONS
INORGANIC ANALYSIS
(mg/kg)

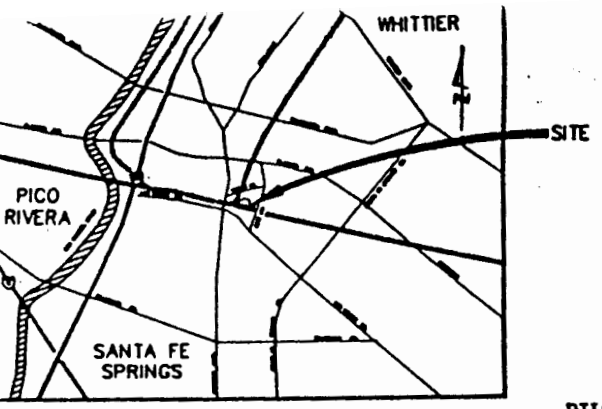
Profile Location	Depth	Cadmium	Chromium (hexavalent)	Chromium (total)	Copper	Iron	Nickel	Lead	Zinc	Cyanide (total)	Arsenic	Mercury	pH
SCC-FECL-SB4	1.0	1.7	1.8	711	463	17,300	42.7	243	413	ND	14.5	ND	9.0
SCC-FECL-SB4	5.0	1.9	ND	558	461	22,400	50.9	188	500	ND	13.5	ND	9.2
SCC-FECL-SB4	11.5	ND	ND	17.6	20.7	16,600	14.2	ND	34.8	ND	7.0	ND	6.7
SCC-FECL-SB4	15.0	ND	ND	8.5	12.2	9,790	7.7	ND	21.3	NA	NA	NA	7.4
SCC-FECL-SB4	19.0	ND	ND	8.6	15.0	11,100	9.9	ND	28.2	NA	NA	NA	7.8
SCC-MW15D	19.5	ND	ND	5.2	7.0	6440	4.6	ND	17.2	ND	1.4	ND	9.0
SCC-MW15D	62.5	0.76	ND	12.0	57.4	8820	9.6	6.3	107	ND	3.3	NA	8.2
SCC-MW15D	105.5	ND	ND	5.8	29.8	6260	5.6	ND	18.7	ND	3.0	NA	7.8
SCC-MW15D	125.5	ND	ND	4.5	17.1	6620	4.2	ND	25.6	ND	1.3	NA	8.4
SCC-PI01	2.5	5.1	ND	37,000	1,180	20,900	61.3	39.0	126.0	ND	72.0	0.4	10.0
SCC-PI01	3.0	1.6	ND	2,360	1,120	17,400	6.4	41.4	108.0	ND	21.0	NA	9.9
SCC-PI01	7.0	1.1	4.0	136	176	18,500	ND	17.7	39.9	ND	5.3	NA	8.6
SCC-PI01	12.0	ND	94.5	896	91	30,300	ND	26.8	67.4	ND	8.8	NA	4.1
SCC-PI01	17.0	ND	1.8	92	19	8,810	ND	7.1	22.4	ND	3.3	ND	8.3
SCC-PI01	21.5	ND	61.2	239	25	9,930	ND	8.5	22.2	ND	3.7	NA	4.1
SCC-PI01	27.0	ND	5.9	1,420	66	20,500	ND	17.6	47.4	ND	7.4	NA	8.4
SCC-PI01	37.0	ND	ND	225	251	36,900	7.8	119.0	109.0	0.8	19.2	ND	3.6
SCC-PL-HB01	1-2	ND	ND	42.7	170	14,400	28.2	30.0	103.0	0.7	5.7	NA	9.7
SCC-PL-HB01	3-4	ND	ND	34.0	36.1	30,700	22.1	8.4	60.5	ND	8.4	ND	6.7
SCC-PL-HB01	5-6	ND	ND	32.9	34.3	29,900	22.9	8.1	60.0	ND	9.0	NA	6.9
SCC-SB2	1.0	40.9	29.4	1,190	7,560	49,700	1,000	14,800	30,800	1.5	58.0	0.9	6.7
SCC-SB2	5.0	9.8	13.2	109	1,480	12,600	246	1,430	8,840	ND	4.2	NA	8.8
SCC-SB2	10.0	21.4	ND	272	16,400	26,300	936	2,850	14,900	ND	12.2	NA	6.8
SCC-SB2	15.0	ND	ND	22.7	31.4	20,200	20.8	6.0	52.7	ND	8.8	0.3	7.7
SCC-SB2	20.5	ND	ND	9.0	11.2	8,530	6.9	8.2	30.9	ND	11.6	NA	7.6
SCC-SB2	30.0	ND	ND	20.0	29.3	29,400	19.6	ND	54.7	ND	10.8	NA	5.0
SCC-SB2	40.5	ND	ND	34.4	44.2	30,200	31.6	12.5	81.1	ND	9.2	ND	7.2

SOUTHERN CALIFORNIA CHEMICAL
RCRA FACILITY INVESTIGATION
PROFILE LOCATIONS
INORGANIC ANALYSIS
(mg/kg)

Profile Location	Depth	Cadmium	Chromium (hexavalent)	Chromium (total)	Copper	Iron	Nickel	Lead	Zinc	Cyanide (total)	Arsenic	Mercury	pH
SCC-SB7	3.0	1.9	73.2	8,030	6,490	27,300	247	860	1,010	1.3	15.0	1.5	7.5
SCC-SB7	5.5	ND	1,040	12,000	448	57,000	12.9	180	27.1	ND	4.6	NA	9.2
SCC-SB7	10.5	ND	216	5540	2,590	28,300	134	11.7	86.3	ND	8.6	NA	3.7
SCC-SB7	15.5	ND	312	2,200	2,470	20,400	47.0	ND	62.6	ND	9.9	NA	3.9
SCC-SB7	20.5	ND	906	7,130	1,400	12,800	45.4	ND	45.8	ND	11.1	ND	3.9
SCC-SB7	30.5	ND	330	2,700	1,650	20,500	74.2	11.6	75.2	ND	9.0	NA	3.3
SCC-SB7	40.5	6.4	1,160	979	65.6	26,100	25.7	7.1	60.3	ND	31.0	0.6	6.5
SCC-SB8	5.0	ND	ND	26.5	2,900	39,000	905	236	360	ND	9.8	ND	2.6
SCC-SB8	10.5	ND	ND	47.4	704	41,400	405	14.7	171	ND	14.0	NA	3.5
SCC-SB8	15.5	ND	ND	5.9	782	6,890	44.7	ND	24.8	ND	2.3	ND	4.1
SCC-SB8	20.5	ND	ND	7.5	152	10,100	118	ND	37.8	ND	3.6	NA	3.0
SCC-SB8	30.5	ND	ND	18.0	38.8	18,900	19.2	ND	48.4	ND	8.6	NA	7.0
SCC-SB8	40.5	ND	ND	37.2	66.9	35,600	35.4	21.0	83.3	ND	30.0	ND	8.6
SCC-WMU18/19	1-2	1.9	ND	828	6,070	44,000	1,070	1,000	869	ND	7.6	0.20	4.5
SCC-WMU18/19	3-4	ND	ND	353	9,660	29,400	425	317	369	ND	19.0	NA	4.5
SCC-WMU18/19	5-6	ND	ND	26.7	2,160	35,000	260	45.7	259	ND	13.0	NA	3.2

= Selected sample for TCLP analysis

FIGURE 3-1



LOCATION PLAN

TANKS

PILOT CHEMICAL (Chemical Mfg)

WITCO (Chemical Mfg)

SCHNEE-MOOREHEAD (Chemical Mfg)

ERS#2 (drums)

(drums)

AMMONIA ETCH (A) AREA

COPPER SULFATE (S) AREA

WASTEWATER (W) AREA

ERS#1 (drums)

FERRIC CHLORIDE AREA (tanks)

MAINTENANCE

LABORATORY

EXIT

MAIN ENTRANCE/EXIT

PARKING LOT

CHLORINE TANK CAR

COPPER OXIDE (C) AREA

SOUTHERN PACIFIC RAILROAD →

West Railroad Gate

East Railroad Gate

SITE PLAN

REVISIONS	BY	REFERENCE DWGS.	PROJECT NO.	DATE
REISSUED FOR REVIEW	R.W.		DESIGNED BY	
REISSUED FOR REVIEW	R.W.		DRAWN BY E.F./RIVAS	
REISSUED FOR REVIEW	R.W.		CHECKED BY	
ISSUED FOR PART "B" PERMIT	R.W.		APPROVED	
REVISED PER TARGHEE	R.W.		REGISTRATION NO. DATE	

R.L. WOOD & ASSOCIATES, INC.
• Engineers •
16321 Gothard Ave., Suite H (714) 848-8774
Huntington Beach, California, 92647

PHIBRO-TECH, INC.
8851 Dice Road
Santa Fe Springs, California

EXISTING SITE PL
&
KEY PLAN
Updated 1/30/92

RECORDS SEPARATOR PAGE

California Health and Welfare Agency — Department of Health Services

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

All applicable items must be completed

1. HML No. 8399 To 8406

2. Page 1 of 2

Collector/Address: Dave Rasmussen, 25 N. San Fernando Bl. #300, Burbank 91405

4. Phone (818) 567-3057

5. Priority [ ]
a. Authorized by ASAP

Date Sampled: December 14, 1989

7. Time Sampled 11:00 Hours

Activity: [x] Enf [x] Surv [ ] Site Mit [ ] Permitting [ ] Alt Tech [ ] Other

SAMPLING LOCATION: CAD008488025

a. EPA ID No.

Name: Southern Cal. Chemical

Address: 8851 Dice Road Santa Fe Springs

Number / Street / City / Zip

8. Codes (fill in all applicable codes)

Code	Value
a. STC	2040
b. Region	3
c. TPC	
d. INDEX	7040
e. PCA	34000
f. SITE	
g. County	1951

SAMPLES

b. Collector's No.	c. HML No.	d. Type	Container e. Type	f. Size	g. Field Information
SCCDLR-1	8399	Soil	glass	8oz	
SCCDLR-2	8400	Soil	glass	8oz	
SCCDLR-3	8401	Soil	glass	8oz	
SCCDLR-4	8402	Soil	glass	8oz	
SCCDLR-5	8403	Soil	glass	8oz	
SCCDLR-6	8404	powder	glass	8oz	
SCCDLR-7	8405	powder	glass	8oz	
SCCDLR-8	8406	powder	glass	8oz	

ANALYSIS REQUESTED

- [x] pH
- [ ] Metal Scan
- [ ] Metals (Spec)
- [ ] W.E.T.
- f. [ ] PCB
- g. [x] VOA
- h. [ ] PAH
- i. [ ] Phenols
- j. [ ] Carbamates
- k. [ ] Ext. Org (Screeng)
- l. [ ] Chlorinated Pesticides
- m. [ ] Organo-P Pesticides
- n. [x] BNA
- o. [ ]

CHAIN OF CUSTODY

Signature	Name/Title	Inclusive Dates
David Rasmussen	David Rasmussen Hazardous Materials Specialist	12/14/89 - 12/14/89
		/ / - / /
		/ / - / /
		/ / - / /

SPECIAL REMARKS

RECEIVED BY [signature] a. Title PH Chem III b. Date 12/14/89

SAMPLE ALLOCATION a. [ ] HML-Berkeley b. [ ] HML-SC c. [ ] AIHL d. [ ] Contract b. Date

ANALYSIS REQUESTED

FIELD / LAB

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

All applicable items must be completed

1. HML No. 8407 To 8411

2. Page 1 of 2

3. Collector David Rasmussen Burbank 1405 N San Fernando Bl 91504

4. Phone ( ) - 8188673037

5. Priority [ ]
a. Authorized by ASAP

6. Date Sampled 12-14-89

7. Time Sampled 11:00 Hours

8. Codes (fill in all applicable codes)
a. STC 3040
b. Region 3
c. TPC
d. NDEX 7040
e. PCA 34000
f. SITE
g. County 031

9. Activity [ ] Enf [ ] Surv [ ] Site Mit [ ] Permitting [ ] Alt Tech [ ] Other

10. SAMPLING LOCATION
a. EPA ID No. CAD008486025
b. Site Southern Cal. Chemical
c. Address 8851 Dice Road Santa Fe Springs
Number Street City Zip

11. SAMPLES

a. ID	b. Collector's No.	c. HML No.	d. Type	e. Container Type	f. Container Size	g. Field Information
A.	SCCDLR9	8407	liquid	glass	8oz	
B.	SCCDLR10	8408	Soil	Glass	8oz	
C.	SCCDLR-11	8409	Liquid/Sludge	Glass	8oz	
D.	SCCDLR12	8410	soil	Glass	8oz	
E.	SCCDLR13	8411	Soil	Glass	8oz	
F.						
G.						
H.						

12. ANALYSIS REQUESTED
a. [x] pH
b. [x] Metal Scan
c. [ ] Metals (Spec)
d. [ ] W.E.T.
f. [ ] PCB
g. [x] VOA
h. [ ] PAH
i. [ ] Phenols
j. [ ] Carbamates
k. [ ] Ext. Org (Screeng)
l. [ ] Chlorinated Pesticides
m. [ ] Organo-P Pesticides
n. [x] BNA
o. [ ]

13. CHAIN OF CUSTODY

	Signature	Name/Title	Inclusive Dates
a.	David Rasmussen	David Rasmussen / Hazardous Material Specialist	12/14/89 - 12/14/89
b.			/ / - / /
c.			/ / - / /
d.			/ / - / /

14. SPECIAL REMARKS

15. RECEIVED BY Enos Chin a. Title PH Chem III b. Date 12/14/89

16. SAMPLE ALLOCATION a. [ ] HML-Berkeley b. [ ] HML-SC c. [ ] AIHL d. [ ] Contract b. Date

17. ANALYSIS REQUESTED

FIELD

LAB

Laboratory Report

Southern California Laboratory - Hazardous Materials Unit
1449 Temple Street, Los Angeles Ca. 90026
Telephone 213-620-3376

To : David Rasmussen SCL No. : 8399 to 8411

Sampling No. : see below Date of Report: 1/9/90

Sample Location: Southern Cal. Chemical
8851 Dice Road Santa Fe. Springs

Analytical Procedures Used: HML 3.23 and EPA 6010

Analysis Results:

SCL No.	8399	8400	8401	8402	8403	8404	8405	8406	8407	8408	8409	8410	8411
Field No.	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Silver	<22	<25	<23	<24	<24	<40	<25	<24	<5	<15	<5	<22	<24
Arsenic	<22	<25	<23	44	<24	<40	<25	<24	<5	<15	20	<43	50
Barium	170	220	140	180	120	150	<25	<24	40	50	100	120	50
Beryllium	<5	<5	<5	<5	<5	<8	<5	<5	<1	<3	<1	<5	<5
Cadmium	<22	<25	<23	<24	<24	<40	<25	<24	<5	<15	<5	<22	<24
Cobalt	<22	<25	<23	<24	<24	<40	<25	<24	<5	<15	<10	<22	<24
Chromium	1500	1200	660	1700	220	<40	<25	<24	10	550	140	150	<24
Copper	770	2100	400	5600	1400	37%*	66%*	66%*	620	3300	7800	2100	5500
Molybdenum	<44	<25	<23	<24	<24	<40	<25	<24	<5	<15	20	<22	<24
Nickel	70	130	35	150	120	170	<50	60	10	270	390	260	310
Lead	490	620	230	1200	320	900	810	350	66	160	210	140	200
Antimony	<44	<25	<23	<48	<24	<40	<25	<24	<5	<15	<5	<22	<24
Selenium	<44	<25	<23	<24	<24	<40	<25	<24	<5	<15	<5	<22	<24
Thallium	<22	<25	<23	<24	<24	<40	<25	<24	<5	<15	<5	<22	<24
Vanadium	<44	34	36	<48	<24	<40	<25	<24	<5	<15	25	<22	<24
Zinc	480	1300	370	1800	510	2800	2500	2500	230	320	600	580	230
pH	6.8	6.5	7.3	6.4	6.9	NA	8.9	9.2	6.7	5.0	5.1	7.2	4.4

* Duplicate samples run and values confirmed by AA
NA insufficient sample submitted to the laboratory. None left for pH analysis.

Analyst's Signature

Gloria R Cruz 01-11-90
Gloria Cruz Date

Supervisor's Signature

Janice Wakakuwa 1/11/90.
Janice Wakakuwa Date

QC Report for Metal Analysis
Southern California Laboratory - Hazardous Materials Unit
1449 Temple Street, Los Angeles, Ca. 90026
Telephone 213-620-3376

To : David Rasmussen Sample Set SCL Nos. :8339 to 8411

Matrix : soil Date of Analysis : 1990

Level of Spike : 1000 mcg Standard Lot Number: SPEX

Duplicate done on : 8404 Spike done on : 8400

Sample Location: Southern California Chemical

Analytical Procedures Used: Digestion HMU 323 Analysis : EPA 6010

	Reagent Blank	Method Std % Rec	Reference Material Expected Range	Found	Duplicate % RPD	Matrix Spike % Rec
I.D. of the Reference material			RM M 1088			
Units	mg/kg	%	mg/kg	mg/kg	%	%
Silver	<0.5	52	230 - 510	460		70
Arsenic	<0.5	91	1340 - 1900	1600		96
Barium	<0.5	99	2500 - 4200	3400	6.4	92
Beryllium	<0.1	102	43 - 62	54		98
Cadmium	<0.5	103	330 - 440	410		95
Cobalt	<0.5	98	2900 - 3900	3400		93
Chromium	<0.5	96	1700 - 2700	2200		71
Copper	<0.5	82	1800 - 2400	1900	5.2	72
Molybdenum	<0.5		2100 - 3400	2800		
Nickel	<0.5	105	1300 - 2200	1800	<1	86
Lead	<0.5	96	730 - 1200	1100	6.4	80
Antimony	<0.5		240 - 440	420		
Selenium	<0.5	96	210 - 410	410		97
Thallium	<0.5	106	510 - 930	805		98
Vanadium	<0.5	100	2400 - 3800	3400		94
Zinc	<0.5	106	2300 - 3200	2800	3.5	74
Acceptable Range		80% - 120%			< 20%	75%-125%

Poor spike recoveries for silver, chromium and copper may be due to non-homogeneity in the sample matrices.

Analyst's Signature

Gloria R Cruz 01-11-90
Gloria Cruz Date

Supervisors Signature

Janice Wakakuwa 1/11/90.
Janice Wakakuwa Date

SCCDLR1	53' East from Lab	21'N SB6	
SCCDLR2	SB5	12:37	12/14
SCCDLR3	SB4	12:41	"
SCCDLR4	- Back Stop west end of Tracks + even with telephone pole to the west		"
SCCDLR5	~~Even~~ Even with yellow scrap metal retaining (south) and dually north of telephone pole (F7') (North of Tank F9)	12:53	"
SCCDLR6	1:15	black powder out of Area between copper ~~oxide~~ oxide dryer & copper sulfate Area	
SCCDLR7	1:28	Inside copper oxide bagging area	
SCCDLR8	1:35	Aside of copper oxide bagging area	

~~Out~~ 12/14/87

SCCDLR9 ~~SCC Gutter Drive~~ 1:54 pm
(Liquid) Gutter - Main Entrance -
Off-site - SCC Facility

SCCDLR 10 SCC - Offsite - Culvert Entrance 12/14/87
Near SCC Railroad Siding - ~~Near~~ East
~~South of Rain Water Tank #3~~ Railroad Gate

SCCDLR 11 SCC - offsite - Culvert (Drain Pipe)
Exit In Ditch accross
Railroad Tracks (Exit of SCCDLR10)

SCCDLR 12 Drainage Ditch - 2:33 pm
Uphill from Drain
Pipe Exit - offsite -
across from west SCC
railroad gate

SCCDLR 13 Across from center of Rain Water Tank
#3 - offsite - Between two
main railroad 2:40 pm
tracks

California-Health and Welfare Agency — Department of Health Services

HAZARDOUS MATERIALS AMPLE ANALYSIS REQUEST

All applicable items must be completed

1. HML No. 8399 To 8406 — 2. Page 1 of 2

ector/Address: ve Rasmussen, 25 N. San Fernando Bl. #300, Burbank CA 91505 — 4. Phone (818) 567-3057

5. Priority ☐ a. Authorized by ASAP

Sampled December 14 1989 — 7. Time Sampled 11 .00 Hours

vity ☑ Enf ☑ Surv ☐ Site Mit ☐ Permitting ☐ Ait Tech ☐ Other

8. Codes (fill in all applicable codes)

a. STC	3 0 9 0
b. Region	3
c. TPC	
d. INDEX	7 0 4 0
e. PCA	3 4 0 0 0
f. SITE	
g. County	0 5 1

AMPLING LOCATION — a. EPA ID No. CAD 0 8 4 1 8 0 2 5

te Southern Cal. Chemical

ddress 8851 Dice Road Santa Fe Springs
Number Street City Zip

AMPLES

b. Collector's No.	c. HML No.	d. Type	e. Container Type	f. Size	g. Field Information
SCCDLR-1	8399	Soil	glass	8oz	
SCCDLR-2	8400	Soil	glass	8oz	
SCCDLR-3	8401	Soil	glass	8oz	
SCCDLR-4	8402	Soil	glass	8oz	
SCCDLR-5	8403	Soil	glass	8oz	
SCCDLR-6	8404	Wipes	glass	8oz	
SCCDLR-7	8405	powder	glass	8oz	
SCCDLR8	8406	powder	glass	8oz	

ALYSIS REQUESTED

pH ____ f. ☐ PCB ____ k. ☐ Ext. Org (Screeng) ____

Metal Scan ____ g. ☑ VOA ____ l. ☐ Chlorinated Pesticides ____

Metals Spec) ____ h. ☐ PAH ____ m. ☐ Organo-P Pesticides ____

W.E.T. ____ i. ☐ Phenols ____ n. ☑ BNA

j. ☐ Carba-mates ____ o. ☐ ____

AIN OF CUSTODY

Signature	Name/Title	Inclusive Dates
David Rasmussen	David Rasmussen Hazardous Material Specialist	12/14/89 - 12/14/89
		/ / - / /
		/ / - / /
		/ / - / /

CIAL REMARKS ____

EIVED BY ____ a. Title PH Chem III b. Date 12/14/89

IPLE ALLOCATION a. ☐ HML-Berkeley b. ☐ HML-SC c. ☐ AIHL d. ☐ Contract b. Date ____

ALYSIS REQUESTED ____

FIELD

LAB

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

All applicable items must be completed

1. HML No. 8407 To 8411 | 2. Page 1 of 1

3. Collector David Rasmussen 1405 N San Fernando Blvd Burbank 4. Phone (818) 567-3057

5. Priority ☐ a. Authorized by ASAP

6. Date Sampled 12-14-89 | 7. Time Sampled 11:00 Hours

8. Codes (fill in all applicable codes)

a. STC	3040
b. Region	3
c. TPC	
d. NDEX	2040
e. PCA	34000
f. SITE	
g. County	037

9. Activity ☐ Enf ☐ Surv ☐ Site Mit ☐ Permitting ☐ Alt Tech ☐ Other

10. SAMPLING LOCATION a. EPA ID No. CADOOR4P8625

b. Site Southern Cal. Chemical

c. Address 8857 (Number) Dice Road (Street) Santa Fe Springs (City) (Zip)

11. SAMPLES

a. ID	b. Collector's No.	c. HML No.	d. Type Container	e. Type Container	f. Size Container	g. Field Information
A.	SCCDLR9	8407	liquid	glass	8oz	
B.	SCCDLR10	8408	soil	Glass	8oz	
C.	SCCDLR11	8409	liquid	Glass	8oz	
D.	SCCDLR12	8410	soil	Glass	8oz	
E.	SCCDLR13	8411	soil	Glass	8oz	
F.						
G.						
H.						

12. ANALYSIS REQUESTED

- a. ☑ pH
- b. ☑ Metal Scan
- c. ☐ Metals (Spec)
- d. ☐ W.E.T.
- f. ☐ PCB
- g. ☑ VOA
- h. ☐ PAH
- i. ☐ Phenols
- j. ☐ Carbamates
- k. ☐ Ext. Org (Screeng)
- l. ☐ Chlorinated Pesticides
- m. ☐ Organo-P Pesticides
- n. ☑ BNA
- o. ☐

13. CHAIN OF CUSTODY

	Signature	Name/Title	Inclusive Dates
a.	David Rasmussen	David Rasmussen / Hazardous Material Specialist	12/14/89 - 12/14/89
b.			/ / - / /
c.			/ / - / /
d.			/ / - / /

14. SPECIAL REMARKS

15. RECEIVED BY Evan Chin a. Title PT Chem III b. Date 12/14/89

16. SAMPLE ALLOCATION a. ☐ HML-Berkeley b. ☐ HML-SC c. ☐ AIHL d. ☐ Contract b. Date

17. ANALYSIS REQUESTED

FIELD

LAB

DHS 8302 (Rev 7-87) Original-Lab • Duplicate-File • Triplicate-Inspector NLY (HML) No 1000

...d Material Laboratory - Hazardous Materials Unit
1449 Temple Street, Los Angeles Ca. 90026
Telephone 213-620-3376

To :D. Rasmussen
Sample Location :So. CA. Chem., 8851 Dice Rd., Santa Fe Sprgs.

SCL No. :8399-8402
Date :1/4/90

GC/MS VOLATILE ORGANIC COMPOUND ANALYSIS by EPA 8260

COMPOUNDS	CAS No.	SCL NO.	8399	8400	8401	8402	DETECTION LIMIT 8399	8400	8401	8402
		COL.NO.	SCCDLR -1	SCCDLR -2	SCCDLR -3	SCCDLR -4	SCCDLR -1	SCCDLR -2	SCCDLR -3	SCCDLR -4
		MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		UNIT	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
METHYLENE CHLORIDE	75-09-2		ND	ND	ND	ND	5	5	5	5
CHLOROFORM	67-66-3		ND	ND	ND	ND	5	5	5	5
1,1,1-TRICHLOROETHANE	71-55-6		ND	ND	ND	ND	5	5	5	5
1,2-DICHLOROETHANE	107-06-2		ND	ND	ND	ND	5	5	5	5
BENZENE	71-43-2		ND	ND	ND	ND	1	1	1	1
CARBONTETRACHLORIDE	56-23-5		ND	ND	ND	ND	5	5	5	5
TRICHLOROETHYLENE	79-01-6		ND	ND	ND	ND	5	5	5	5
TOLUENE	108-88-3		ND	ND	ND	ND	1	1	1	1
PERCHLOROETHYLENE	127-18-4		ND	ND	ND	ND	5	5	5	5
CHLOROBENZENE	108-90-7		ND	ND	ND	ND	1	1	1	1
ETHYLBENZENE	100-41-1		ND	ND	ND	ND	1	1	1	1
M&P-XYLENES	108-38-3,106-42-3		ND	ND	ND	ND	1	1	1	1
STYRENE	100-42-5		ND	ND	ND	ND	1	1	1	1
O-XYLENE	95-47-6		ND	ND	ND	ND	1	1	1	1
CUMENE	98-82-8		ND	ND	ND	ND	1	1	1	1
O-CHLOROTOLUENE	95-49-8		ND	ND	ND	ND	1	1	1	1
N-PROPYL BENZENE	103-65-1		ND	ND	ND	ND	1	1	1	1
P-CHLOROTOLUENE	106-43-4		ND	ND	ND	ND	1	1	1	1
1,3,5-TRIMETHYLBENZENE	106-06-6		ND	ND	ND	ND	1	1	1	1
T-BUTYLBENZENE	98-06-6		ND	ND	ND	ND	1	1	1	1
1,2,4-TRIMETHYLBENZENE	95-63-6		<1.4	ND	ND	ND	1	1	1	1
1,3 DICHLOROBENZENE	541-73-1		ND	ND	ND	ND	1	1	1	1
sec-BUTYLBENZENE	135-98-8		ND	ND	ND	ND	1	1	1	1
P-DICHLOROBENZENE	106-46-7		ND	ND	ND	ND	1	1	1	1
1,2,3-TRIMETHYLBENZENE			ND	ND	ND	ND	1	1	1	1
P-CYMENE	99-87-6		ND	ND	ND	ND	1	1	1	1
O-DICHLOROBENZENE	95-50-1		ND	ND	ND	ND	1	1	1	1
N-BUTYLBENZENE	104-51-8		ND	ND	ND	ND	1	1	1	1
1,2,4-TRICHLOROBENZENE	102-82-1		ND	ND	ND	ND	1	1	1	1
NAPHTHALENE	91-20-3		ND	ND	ND	ND	1	1	1	1
1,2,3-TRICHLOROBENZENE	87-61-6		ND	ND	ND	ND	1	1	1	1
ACETONE	67-64-1		NA	NA	NA	NA	NA	NA	NA	NA
METHYL ISOBUTYL KETONE	108-10-1		NA	NA	NA	NA	NA	NA	NA	NA
METHYL ETHYL KETONE	78-93-3		NA	NA	NA	NA	NA	NA	NA	NA
1,1 DICHLOROETHYLENE	75-35-4		ND	ND	ND	ND	5	5	5	5
1,2 DICHLOROETHYLENE(T)	156-60-5		ND	ND	ND	ND	5	5	5	5
1,1 DICHLOROETHANE	75-34-3		ND	ND	ND	ND	5	5	5	5
1,2 DICHLOROETHYLENE(C)	156-69-4		ND	ND	ND	ND	5	5	5	5
1,1 DICHLOROPROPENE	563-58-6		ND	ND	ND	ND	5	5	5	5
1,2 DICHLOROPROPENE			ND	ND	ND	ND	5	5	5	5
1,2 DICHLOROPROPANE	78-87-5		ND	ND	ND	ND	5	5	5	5
BROMODICHLOROMETHANE	74-97-5		ND	ND	ND	ND	5	5	5	5
1,3 DICHLOROPROPENE(C)	10061-01-5		ND	ND	ND	ND	5	5	5	5
1,3-DICHLOROPROPENE(T)	10061-02-6		ND	ND	ND	ND	5	5	5	5
1,1,2 TRICHLOROETHANE	79-00-5		ND	ND	ND	ND	5	5	5	5
1,3 DICHLOROPROPANE	142-28-9		ND	ND	ND	ND	5	5	5	5
DIBROMOCHLOROMETHANE	124-38-1		ND	ND	ND	ND	5	5	5	5
BROMOFORM	75-25-2		ND	ND	ND	ND	5	5	5	5
ETHYLENE DIBROMIDE	74-95-3		ND	ND	ND	ND	5	5	5	5
1,1,2,2 TETRACHLOROETHANE	630-20-6		ND	ND	ND	ND	5	5	5	5
1,2,3 TRICHLOROPROPANE	96-18-4		ND	ND	ND	ND	5	5	5	5
HEXACHLOROBUTADIENE	87-68-3		ND	ND	ND	ND	5	5	5	5
VINYL CHLORIDE	75-01-4		ND	ND	ND	ND	5	5	5	5

Note: ND = NOT DETECTED NA = NOT ANALYZED

Analyst' Signature
Clayton Mabuni 1/5/90
Clayton Mabuni Date

Supervising Chemist's Signature
Janice Wakekuwa 1/6/90
Janice Wakekuwa Date

Southern California Laboratory - Hazardous Materials Unit
1449 Temple Street, Los Angeles Ca. 90026
Telephone 213-620-3376

To :D. Rasmussen SCL No. :8403-8406
Sample Location :So. CA. Chem., 9851 Dice Rd., Santa Fe Sprgs. Date :1/4/90

GC/MS VOLATILE ORGANIC COMPOUND ANALYSIS by EPA 8260

COMPOUNDS	SCL NO.	8403	8404	8405	8406	DETECTION LIMIT 8403	8404	8405	8406
	COL.NO.	SCCDLR -5	SCCDLR -6	SCCDLR -7	SCCDLR -8				
	MATRIX	SOIL	POWDER	POWDER	POWDER				
	UNIT	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	CAS No.								
METHYLENE CHLORIDE	75-09-2	ND	ND	ND	ND	5	5	5	5
CHLOROFORM	67-66-3	ND	ND	ND	ND	5	5	5	5
1,1,1-TRICHLOROETHANE	71-55-6	ND	ND	ND	ND	5	5	5	5
1,2-DICHLOROETHANE	107-06-2	ND	ND	ND	ND	5	5	5	5
BENZENE	71-43-2	ND	ND	ND	ND	1	1	1	1
CARBONTETRACHLORIDE	56-23-5	ND	ND	ND	ND	5	5	5	5
TRICHLOROETHYLENE	79-01-6	ND	ND	ND	ND	5	5	5	5
TOLUENE	108-88-3	ND	ND	ND	ND	1	1	1	1
PERCHLOROETHYLENE	127-18-4	ND	ND	ND	ND	5	5	5	5
CHLOROBENZENE	108-90-7	ND	ND	ND	ND	1	1	1	1
ETHYLBENZENE	100-41-1	ND	ND	ND	ND	1	1	1	1
M&P-XYLENES 108-38-3,	106-42-3	ND	<1.3	ND	ND	1	1	1	1
STYRENE	100-42-5	ND	14.4	ND	<1.1	1	1	1	1
O-XYLENE	95-47-6	ND	<1.3	ND	ND	1	1	1	1
CUMENE	98-82-8	ND	ND	ND	ND	1	1	1	1
O-CHLOROTOLUENE	95-49-8	ND	ND	ND	ND	1	1	1	1
N-PROPYL BENZENE	103-65-1	ND	ND	ND	ND	1	1	1	1
P-CHLOROTOLUENE	106-43-4	ND	ND	ND	ND	1	1	1	1
1,3,5-TRIMETHYLBENZENE	106-06-6	ND	ND	ND	ND	1	1	1	1
T-BUTYLBENZENE	98-06-6	ND	ND	ND	ND	1	1	1	1
1,2,4-TRIMETHYLBENZENE	95-63-6	ND	ND	ND	ND	1	1	1	1
1,3 DICHLOROBENZENE	541-73-1	ND	ND	ND	ND	1	1	1	1
sec-BUTYLBENZENE	135-98-8	ND	ND	ND	ND	1	1	1	1
P-DICHLOROBENZENE	106-46-7	ND	ND	ND	ND	1	1	1	1
1,2,3-TRIMETHYLBENZENE		ND	ND	ND	ND	1	1	1	1
P-CYMENE	99-87-6	ND	ND	ND	ND	1	1	1	1
O-DICHLOROBENZENE	95-50-1	ND	ND	ND	ND	1	1	1	1
N-BUTYLBENZENE	104-51-8	ND	ND	ND	ND	1	1	1	1
1,2,4-TRICHLOROBENZENE	102-82-1	ND	ND	ND	ND	1	1	1	1
NAPHTHALENE	91-20-3	ND	ND	ND	ND	1	1	1	1
1,2,3-TRICHLOROBENZENE	87-61-6	ND	ND	ND	ND	1	1	1	1
ACETONE	67-64-1	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ISOBUTYL KETONE	108-10-1	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ETHYL KETONE	78-93-3	NA	NA	NA	NA	NA	NA	NA	NA
1,1 DICHLOROETHYLENE	75-35-4	ND	ND	ND	ND	5	5	5	5
1,2 DICHLOROETHYLENE(T)	156-60-5	ND	ND	ND	ND	5	5	5	5
1,1 DICHLOROETHANE	75-34-3	ND	ND	ND	ND	5	5	5	5
1,2 DICHLOROETHYLENE(C)	156-59-4	ND	ND	ND	ND	5	5	5	5
1,1 DICHLOROPROPENE	563-58-6	ND	ND	ND	ND	5	5	5	5
1,2 DICHLOROPROPENE		ND	ND	ND	ND	5	5	5	5
1,2 DICHLOROPROPANE	78-87-5	ND	ND	ND	ND	5	5	5	5
BROMODICHLOROMETHANE	74-97-5	ND	ND	ND	ND	5	5	5	5
1,3 DICHLOROPROPENE(C)	10061-01-5	ND	ND	ND	ND	5	5	5	5
1,3-DICHLOROPROPENE(T)	10061-02-6	ND	ND	ND	ND	5	5	5	5
1,1,2 TRICHLOROETHANE	79-00-5	ND	ND	ND	ND	5	5	5	5
1.3 DICHLOROPROPANE	142-28-9	ND	ND	ND	ND	5	5	5	5
DIBROMOCHLOROMETHANE	124-48-1	ND	ND	ND	ND	5	5	5	5
BROMOFORM	75-25-2	ND	ND	ND	ND	5	5	5	5
ETHYLENE DIBROMIDE	74-95-3	ND	ND	ND	ND	5	5	5	5
1,1,2,2 TETRACHLOROETHANE	630-20-6	ND	ND	ND	ND	5	5	5	5
1,2,3 TRICHLOROPROPANE	96-18-4	ND	ND	ND	ND	5	5	5	5
HEXACHLOROBUTADIENE	87-68-3	ND	ND	ND	ND	5	5	5	5
VINYL CHLORIDE	75-01-4	ND	ND	ND	ND	5	5	5	5

Note: ND = NOT DETECTED NA = NOT ANALYZED Tentatively observed but not quantitated, C7 to C13 in SCL 8404.

Analyst' Signature
Clayton Mahue 1/5/90
Clayton Mahue

Supervising Chemist's Signature
Lance Takakuwa. 1/5/90.
Lance Takakuwa

Southern California Laboratory - Hazardous Materials Unit
1449 Temple Street, Los Angeles Ca. 90026
Telephone 213-620-3376

To :D. Rasmussen SCL No. :8407-8409
Sample Location :So. CA. Chem., 8851 Dice Rd., Santa Fe Sprgs. Date :1/4/90

GC/MS VOLATILE ORGANIC COMPOUND ANALYSIS by EPA 8260

COMPOUNDS	SCL NO.	8407*	8408	84091*	8409s#	DETECTION LIMIT 8407	8408	84091	8409s
	COL.NO.	SCCDLR -9	SCCDLR -10	SCCDLR -11	SCCDLR -11				
	MATRIX	SLUDGE	SOIL	SLUDGE	SLUDGE				
	UNIT	mg/l	mg/kg	mg/l	mg/kg	mg/l	mg/kg	mg/l	mg/kg
	CAS No.								
METHYLENE CHLORIDE	75-09-2	ND	ND	ND	ND	<.005	5	<.005	5
CHLOROFORM	67-66-3	ND	ND	ND	ND	<.005	5	<.005	5
1,1,1-TRICHLOROETHANE	71-55-6	ND	ND	ND	ND	<.005	5	<.005	5
1,2-DICHLOROETHANE	107-06-2	ND	ND	ND	ND	<.005	5	<.005	5
BENZENE	71-43-2	ND	ND	ND	ND	<.001	1	<.001	1
CARBONTETRACHLORIDE	56-23-5	ND	ND	ND	ND	<.005	5	<.005	5
TRICHLOROETHYLENE	79-01-6	ND	ND	ND	ND	<.005	5	<.005	5
TOLUENE	108-88-3	ND	ND	ND	ND	<.001	1	<.001	1
PERCHLOROETHYLENE	127-18-4	ND	ND	ND	ND	<.005	5	<.005	5
CHLOROBENZENE	108-90-7	ND	ND	ND	ND	<.001	1	<.001	1
ETHYLBENZENE	100-41-4	ND	ND	ND	ND	<.001	1	<.001	1
M&P-XYLENES 108-38-3,	106-42-3	ND	ND	ND	ND	<.001	1	<.001	1
STYRENE	100-42-5	ND	ND	ND	ND	<.001	1	<.001	1
O-XYLENE	95-47-6	ND	ND	ND	ND	<.001	1	<.001	1
CUMENE	98-82-8	ND	ND	ND	ND	<.001	1	<.001	1
O-CHLOROTOLUENE	95-49-8	ND	ND	ND	ND	<.001	1	<.001	1
N-PROPYL BENZENE	103-65-1	ND	ND	ND	ND	<.001	1	<.001	1
P-CHLOROTOLUENE	106-43-4	ND	ND	ND	ND	<.001	1	<.001	1
1,3,5-TRIMETHYLBENZENE	108-06-6	ND	ND	ND	ND	<.001	1	<.001	1
T-BUTYLBENZENE	98-06-6	ND	ND	ND	ND	<.001	1	<.001	1
1,2,4-TRIMETHYLBENZENE	95-63-6	ND	ND	ND	ND	<.001	1	<.001	1
1,3 DICHLOROBENZENE	541-73-1	ND	ND	ND	ND	<.001	1	<.001	1
sec-BUTYLBENZENE	135-98-8	ND	ND	ND	ND	<.001	1	<.001	1
P-DICHLOROBENZENE	106-46-7	ND	ND	ND	ND	<.001	1	<.001	1
1,2,3-TRIMETHYLBENZENE		ND	ND	ND	ND	<.001	1	<.001	1
P-CYMENE	99-87-6	ND	ND	ND	ND	<.001	1	<.001	1
O-DICHLOROBENZENE	95-50-1	ND	ND	ND	ND	<.001	1	<.001	1
N-BUTYLBENZENE	104-51-8	ND	ND	ND	ND	<.001	1	<.001	1
1,2,4-TRICHLOROBENZENE	102-82-1	ND	ND	ND	ND	<.001	1	<.001	1
NAPHTHALENE	91-20-3	ND	ND	ND	ND	<.001	1	<.001	1
1,2,3-TRICHLOROBENZENE	87-61-6	ND	ND	ND	ND	<.001	1	<.001	1
ACETONE	67-64-1	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ISOBUTYL KETONE	108-10-1	NA	NA	NA	NA	NA	NA	NA	NA
METHYL ETHYL KETONE	78-93-3	NA	NA	NA	NA	NA	NA	NA	NA
1,1 DICHLOROETHYLENE	75-35-4	ND	ND	ND	ND	<.005	5	<.005	5
1,2 DICHLOROETHYLENE(T)	156-60-5	ND	ND	ND	ND	<.005	5	<.005	5
1,1 DICHLOROETHANE	75-34-3	ND	ND	ND	ND	<.005	5	<.005	5
1,2 DICHLOROETHYLENE(C)	156-59-4	ND	ND	ND	ND	<.005	5	<.005	5
1,1 DICHLOROPROPENE	563-58-6	ND	ND	ND	ND	<.005	5	<.005	5
1,2 DICHLOROPROPENE		ND	ND	ND	ND	<.005	5	<.005	5
1,2 DICHLOROPROPANE	78-87-5	ND	ND	ND	ND	<.005	5	<.005	5
BROMODICHLOROMETHANE	74-97-5	ND	ND	ND	ND	<.005	5	<.005	5
1,3 DICHLOROPROPENE(C)	10061-01-5	ND	ND	ND	ND	<.005	5	<.005	5
1,3-DICHLOROPROPENE(T)	10061-02-6	ND	ND	ND	ND	<.005	5	<.005	5
1,1,2 TRICHLOROETHANE	79-00-5	ND	ND	ND	ND	<.005	5	<.005	5
1,3 DICHLOROPROPANE	142-28-9	ND	ND	ND	ND	<.005	5	<.005	5
DIBROMOCHLOROMETHANE	124-48-1	ND	ND	ND	ND	<.005	5	<.005	5
BROMOFORM	75-25-2	ND	ND	ND	ND	<.005	5	<.005	5
ETHYLENE DIBROMIDE	74-95-3	ND	ND	ND	ND	<.005	5	<.005	5
1,1,2,2 TETRACHLOROETHANE	630-20-6	ND	ND	ND	ND	<.005	5	<.005	5
1,2,3 TRICHLOROPROPANE	96-18-4	ND	ND	ND	ND	<.005	5	<.005	5
HEXACHLOROBUTADIENE	87-68-3	ND	ND	ND	ND	<.005	5	<.005	5
VINYL CHLORIDE	75-01-4	ND	ND	ND	ND	<.005	5	<.005	5

Note: ND = NOT DETECTED NA = NOT ANALYZED *Analysis of aqueous phase #Analysis of mud

Analyst' Signature
Clayton Malone 1/5/90
Clayton Malone Date

Supervising Chemist's Signature
Janice Nakamura 1/5/90
Janice Nakamura Date

1449 Temple Street, Los Angeles Ca. 90026
Telephone 213-620-3316

To :D. Rasmussen SCL No. :8410, 8411
Sample Location :So. CA. Chem., 8851 Dice Rd., Santa Fe Sprgs. Date :1/4/90

GC/MS VOLATILE ORGANIC COMPOUND ANALYSIS by EPA 8250

COMPOUNDS	SCL NO.	8410	8411			DETECTION LIMIT	
	COL.NO.	SCCDLR -12	SCCDLR -13			SCCDLR -12	SCCDLR -13
	MATRIX	SOIL	SOIL			SOIL	SOIL
	UNIT	mg/kg	mg/kg			mg/kg	mg/kg
	CAS No.						
METHYLENE CHLORIDE	75-09-2	ND	ND			5	5
CHLOROFORM	67-66-3	ND	ND			5	5
1,1,1-TRICHLOROETHANE	71-55-6	ND	ND			5	5
1,2-DICHLOROETHANE	107-06-2	ND	ND			5	5
BENZENE	71-43-2	ND	ND			1	1
CARBONTETRACHLORIDE	56-23-5	ND	ND			5	5
TRICHLOROETHYLENE	79-01-6	ND	ND			5	5
TOLUENE	108-88-3	ND	ND			1	1
PERCHLOROETHYLENE	127-18-4	ND	ND			5	5
CHLOROBENZENE	108-90-7	ND	ND			1	1
ETHYLBENZENE	100-41-1	ND	ND			1	1
M&P-XYLENES	108-38-3,106-42-3	ND	ND			1	1
STYRENE	100-42-5	ND	ND			1	1
O-XYLENE	95-47-6	ND	ND			1	1
CUMENE	98-82-8	ND	ND			1	1
O-CHLOROTOLUENE	95-49-8	ND	ND			1	1
N-PROPYL BENZENE	103-65-1	ND	ND			1	1
P-CHLOROTOLUENE	106-43-4	ND	ND			1	1
1,3,5-TRIMETHYLBENZENE	106-06-6	ND	ND			1	1
T-BUTYLBENZENE	98-06-6	ND	ND			1	1
1,2,4-TRIMETHYLBENZENE	95-63-6	ND	ND			1	1
1,3 DICHLOROBENZENE	541-73-1	ND	ND			1	1
sec-BUTYLBENZENE	135-98-8	ND	ND			1	1
P-DICHLOROBENZENE	106-46-7	ND	ND			1	1
1,2,3-TRIMETHYLBENZENE		ND	ND			1	1
P-CYMENE	99-87-6	ND	ND			1	1
O-DICHLOROBENZENE	95-50-1	ND	ND			1	1
N-BUTYLBENZENE	104-51-8	ND	ND			1	1
1,2,4-TRICHLOROBENZENE	102-82-1	ND	ND			1	1
NAPHTHALENE	91-20-3	ND	ND			1	1
1,2,3-TRICHLOROBENZENE	87-61-6	ND	ND			1	1
ACETONE	67-64-1	NA	NA			NA	NA
METHYL ISOBUTYL KETONE	108-10-1	NA	NA			NA	NA
METHYL ETHYL KETONE	78-93-3	NA	NA			NA	NA
1,1 DICHLOROETHYLENE	75-35-4	ND	ND			5	5
1,2 DICHLOROETHYLENE(T)	156-60-5	ND	ND			5	5
1,1 DICHLOROETHANE	75-34-3	ND	ND			5	5
1,2 DICHLOROETHYLENE(C)	156-59-4	ND	ND			5	5
1,1 DICHLOROPROPENE	563-58-6	ND	ND			5	5
1,2 DICHLOROPROPENE		ND	ND			5	5
1,2 DICHLOROPROPANE	78-87-5	ND	ND			5	5
BROMODICHLOROMETHANE	74-97-5	ND	ND			5	5
1,3 DICHLOROPROPENE(C)	10061-01-5	ND	ND			5	5
1,3-DICHLOROPROPENE(T)	10061-02-6	ND	ND			5	5
1,1,2 TRICHLOROETHANE	79-00-5	ND	ND			5	5
1,3 DICHLOROPROPANE	142-28-9	ND	ND			5	5
DIBROMOCHLOROMETHANE	124-38-1	ND	ND			5	5
BROMOFORM	75-25-2	ND	ND			5	5
ETHYLENE DIBROMIDE	74-95-3	ND	ND			5	5
1,1,2,2 TETRACHLOROETHANE	630-20-6	ND	ND			5	5
1,2,3 TRICHLOROPROPANE	96-18-4	ND	ND			5	5
HEXACHLOROBUTADIENE	87-68-3	ND	ND			5	5
VINYL CHLORIDE	75-01-4	ND	ND			5	5

Note: ND = NOT DETECTED NA = NOT ANALYZED

Analyst' Signature
Clayton Mabuni 1/5/90
Clayton Mabuni
Date

Supervising Chemist's Signature
Janice Watanabe 1/5/90
Janice Watanabe
Date

Southern California Laboratory Hazardous Materials Unit
1449 Temple Street Los Angeles Ca. 90026
Telephone 213-620-2376

To :G. Rasmussen Sample Set SCL NO.:8399-8411

Date :1/5/90

Sample Location : So. Calif. Chem., 8851 Dice Rd., Santa Fe Springs

Analytical Procedures Used : EPA 8260 GC/MS for volatile organics.

QC REPORT FOR VOLATILE ORGANIC ANALYSIS

SAMPLE DUPLICATE ANALYSIS:

Performed on SCL NO. Matrix:

Compound	Unit	Sample	Sample Duplicate	Average	Relative % diff RPD	Normal Range of RPD
						<20
						<20
						<20
						<20
						<20
						<20
						<20
						<20
						<20
						<20

MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS:

Performed on SCL NO. 8400 Matrix: Soil Level of Spike: 20 ng/ml

Compounds Spiked	Matrix Spike % Recovery	Matrix Spike Duplicate % Recovery	Average Matrix Spike % Recovery	Relative % diff between Matrix Spike Duplicates	Normal Range for Matrix Spike % Recovery
1,1-Dichloroethene	63	61	62	3.2	50% - 110%
Trichloroethene	77	74	76	3.9	50% - 110%
Chlorobenzene	83	82	83	1.2	50% - 110%
Toluene	82	81	82	1.2	50% - 110%
Benzene	84	83	84	1.2	50% - 110%

NOTE: NA = not analyzed NR = not recovered (-) = no data collected

Analyst's Signatures:

Clayton Mabra 1/5/90
~~Ing. Ang~~ Date

Supervising Chemist's Signature:

Janice Wakakuwa 1/5/90
Janice Wakakuwa Date

APR 9 1990

State of California-Health and Welfare Agency

Department of Health Services

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

All applicable items must be completed

1. HML No. To
2. Page 1 of 2

3. Collector/Address: David Rasmussen, 1405 N San Fernando Bl. Burbank, CA
4. Phone (818) 567-3057
5. Priority ☐
   a. Authorized by

6. Date Sampled: 3-14-90
7. Time Sampled: 10:00 Hours

8. Codes (fill in all applicable codes)

a. STC	3040
b. Region	3
c. TPC	
d. INDEX	7040
e. PCA	34000
f. SITE	
g. County	031

9. Activity ☑ Enf ☑ Surv ☐ Site Mit ☐ Permitting ☐ Ait Tech' ☐ Other

10. SAMPLING LOCATION

a. EPA ID No.: CAD008488025

b. Site: Southern California Chemical

c. Address: 8851 Dice Road, Santa Fe Springs (Number / Street / City / Zip)

11. SAMPLES

a. ID	b. Collector's No.	c. HML No.	d. Type	Container e. Type	Container f. Size	g. Field Information
A.	SCCDM-1	8649	Soil	glass	500ml	Proposed servich bridearea - Near E q tank 11 FT N pole
B.	SCCDM-2	8650	Soil	glass		NFCA - middle pole near RR even with yellow pole 50 FT N scrap
C.	SCCDM-3	8651	Soil	glass		NFCA - even with pole & yellow pole
D.	SCCDM-4	8652	Soil	Glass		NFCA - end of RR tracks, even with S side bes mon FCA
E.	SCCDM-5	8653	powder	glass		copper nitrate drum in Copper oxide drying area
F.	SCCDM-6	8654	powder	glass		ground behind drum copper oxide drying area
G.	SCCDM-7	8655	Powder	glass		"Leaker" tray copper oxide E of w/house
H.	SCCDM-8	8656	powder	glass	↓	black powder on ground at building

FIELD

12. ANALYSIS REQUESTED

a. ☑ pH: A, B, C, D.
b. ☑ Metal Scan
c. ☐ Metals (Spec)
d. ☑ W.E.T. ~~A, B, C, D, G, H~~ G if needed
f. ☑ PCB: A, B, C, D
g. ☐ VOA
h. ☐ PAH
i. ☐ Phenols
j. ☐ Carbamates
k. ☐ Ext. Org (Screeng)
l. ☐ Chlorinated Pesticides
m. ☐ Organo-P Pesticides
n. ☐
o. ☐

13. CHAIN OF CUSTODY

	Signature	Name/Title	Inclusive Dates
a.	David R Rasmussen	David Rasmussen Hazardous Material Specialist	3/14/90 - 3/15/90
b.			/ / - / /
c.			/ / - / /
d.			/ / - / /

14. SPECIAL REMARKS

15. RECEIVED BY [signature] a. Title PH Chemist III b. Date 3/15/90

16. SAMPLE ALLOCATION a. ☐ HML-Berkeley b. ☐ HML-SC c. ☐ AIHL d. ☐ Contract b. Date

17. ANALYSIS REQUESTED

LAB

State of California-Health and Welfare Agency — Department of Health Services

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

All applicable items must be completed

1. HML No. To

2. Page 2 of 2

3. Collector/Address David Rasmussen, 1405 N. San Fernando Bl, Burbank, CA

4. Phone (818) 567-3057

5. Priority ☐ a. Authorized by

6. Date Sampled 3-14-90

7. Time Sampled 16 00 Hours

8. Codes (fill in all applicable codes)

a. STC	3040
b. Region	3
c. TPC	
d. INDEX	7040
e. PCA	34000
f. SITE	
g. County	037

9. Activity ☑ Enf ☑ Surv ☐ Site Mit ☐ Permitting ☐ Ait Tech ☐ Other

10. SAMPLING LOCATION

a. EPA ID No. CAD098148835

b. Site Southern Cal. Chemical

c. Address 8857 Dice Road, Santa Fe Springs (Number / Street / City / Zip)

11. SAMPLES

a. ID	b. Collector's No.	c. HML No.	Container d. Type	Container e. Type	Container f. Size	g. Field Information
A.	SCCDM9	86557	powder	glass	500ml	"cooker" tray near maintenance shop
B.	SCCDM10	86558	sludge/liquid	glass	500ml	oil type waste drum
C.	SCCDM11	86559	soil	glass	500ml	Grand near Pond 3
D.	SCCDM12	86560	sludge	glass	500ml	Front gutter
E.						
F.						
G.						
H.						

12. ANALYSIS REQUESTED

a. ☑ pH C
b. ☑ Metal Scan
c. ☐ Metals (Spec)
d. ☑ W.E.T. A, D if needed
f. ☑ PCB C
g. ☐ VOA
h. ☐ PAH
i. ☐ Phenols
j. ☐ Carbamates
k. ☐ Ext. Org (Screeng)
l. ☐ Chlorinated Pesticides
m. ☐ Organo-P Pesticides
n. ☐
o. ☑ TPH on B

13. CHAIN OF CUSTODY

	Signature	Name/Title	Inclusive Dates
a.	David Rasmusse	David Rasmussen / Hazardous Material Specialist	3/14/90 - 3/15/90
b.			/ / - / /
c.			/ / - / /
d.			/ / - / /

14. SPECIAL REMARKS

15. RECEIVED BY [illegible] a. Title PH Chemist III b. Date 3/15/90

16. SAMPLE ALLOCATION a. ☐ HML-Berkeley b. ☐ HML-SC c. ☐ AIHL d. ☐ Contract b. Date

17. ANALYSIS REQUESTED

FIELD

LAB

DHS 8002 (Rev 7/87) — Original-Lab • Duplicate-File • Triplicate-Inspector — NLY (HML)

California-Health and Welfare Agency — Department of Health Services

HAZARDOUS MATERIALS AMPLE ANALYSIS REQUEST

All applicable items must be completed

1. HML No. 8399 To 8406 — 2. Page 1 of 2

ector/Address: Dave Rasmussen, 615 N. San Fernando Bl #300, Burbank CA 91505 — 4. Phone (818) 567-3057

5. Priority ☐ a. Authorized by ASAP

Sampled December 14, 1989 — 7. Time Sampled 11 .00 Hours

vity ☑ Enf ☑ Surv ☐ Site Mit ☐ Permitting ☐ Ait Tech ☐ Other

8. Codes (fill in all applicable codes)

a. STC	3040
b. Region	3
c. TPC	
d. INDEX	7040
e. PCA	34000
f. SITE	
g. County	037

MPLING LOCATION — a. EPA ID No. CAD008454802

e: Southern Cal. Chemical

dress: 8851 Dice Road Santa Fe Springs
Number Street City Zip

AMPLES

b. Collector's No.	c. HML No.	d. Type	Container e. Type	Container f. Size	g. Field Information
SCDLR-1	8399	Soil	glass	8oz	
SCDLR-2	8400	Soil	glass	8oz	
SCDLR-3	8401	Soil	glass	8oz	
SCDLR-4	8402	Soil	glass	8oz	
SCDLR-5	8403	Soil	Glass	8oz	
SCDLR-6	8404	Powder	glass	8oz	
SCDLR-7	8405	powder	glass	8oz	
SCDLR8	8406	powder	glass	8oz	

FIELD

ALYSIS REQUESTED

pH		f. ☐ PCB	k. ☐ Ext. Org (Screeng)
Metal Scan		g. ☑ VOA	l. ☐ Chlorinated Pesticides
Metals Spec)		h. ☐ PAH	m. ☐ Organo-P Pesticides
W.E.T.		i. ☐ Phenols	n. ☑ BNA
		j. ☐ Carba-mates	o. ☐

AIN OF CUSTODY

Signature	Name/Title	Inclusive Dates
David Rasmussen	David Rasmussen, Hazardous Materials Specialist	12/14/89 - 12/14/89
		/ / - / /
		/ / - / /
		/ / - / /

CIAL REMARKS

CEIVED BY Linda Chan — a. Title PH Chem III — b. Date 12/14/89

MPLE ALLOCATION a. ☐ HML-Berkeley b. ☐ HML-SC c. ☐ AIHL d. ☐ Contract b. Date

ALYSIS REQUESTED

LAB

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

All applicable items must be completed

1. HML No. 8407 To 8411 | 2. Page 1 of 2

3 Collector David Rasmussen, 1405 N San Fernando Blvd, Burbank 4. Phone (818) 567-3057

5. Priority ☐ a. Authorized by ASAP

6 Date Sampled 12-14-89 7. Time Sampled 11:00 Hours

8. Codes (fill in all applicable codes)

a. STC	3040
b. Region	3
c. TPC	
d. NDEX	2040
e. PCA	34000
f. SITE	
g. County	037

9. Activity ☐ Enf ☐ Surv ☐ Site Mit ☐ Permitting ☐ Alt Tech ☐ Other

10. SAMPLING LOCATION a. EPA ID No. CAD 00 748 602 5

b. Site Southern Cal. Chemical

c. Address 8857 (Number) Dice Road (Street) Santa Fe Springs (City) (Zip)

11. SAMPLES

a. ID	b. Collector's No.	c. HML No.	d. Type	e. Container Type	f. Container Size	g. Field Information
A.	SCCDLR9	8407	liquid	glass	8oz	
B.	SCCDLR10	8408	soil	glass	8oz	
C.	SCCDLR11	8409	liquid/sludge	glass	8oz	
D.	SCCDLR12	8410	soil	glass	8oz	
E.	SCCDLR13	8411	soil	glass	8oz	
F.						
G.						
H.						

12. ANALYSIS REQUESTED

- a. ☑ pH
- b. ☑ Metal Scan
- c. ☐ Metals (Spec)
- d. ☐ W.E.T.
- f. ☐ PCB
- g. ☑ VOA
- h. ☐ PAH
- i. ☐ Phenols
- j. ☐ Carbamates
- k. ☐ Ext. Org (Screeng)
- l. ☐ Chlorinated Pesticides
- m. ☐ Organo-P Pesticides
- n. ☑ BNA
- o. ☐

13. CHAIN OF CUSTODY

	Signature	Name/Title	Inclusive Dates
a.	David Rasmussen	David Rasmussen / Hazardous Material Specialist	12/14/89 - 12/14/89
b.			/ / - / /
c.			/ / - / /
d.			/ / - / /

14. SPECIAL REMARKS

15. RECEIVED BY Enrico Chin a. Title P+I Chem III b. Date 12/14/89

16. SAMPLE ALLOCATION a. ☐ HML-Berkeley b. ☐ HML-SC c. ☐ AIHL d. ☐ Contract b. Date

17. ANALYSIS REQUESTED

FIELD

LAB

DHS 8302 (Rev 7/87) Original-Lab • Duplicate-File • Triplicate-Inspector ONLY (HML) No. 10

Laboratory Report

Southern California Laboratory - Hazardous Materials Unit
1449 Temple Street, Los Angeles Ca. 90026
Telephone 213-620-3376

To : David Rasmussen SCL No. : 8399 to 8411

Sampling No. : see below Date of Report: 1/9/90

Sample Location: Southern Cal. Chemical
8851 Dice Road Santa Fe. Springs

Analytical Procedures Used: HML 3.23 and EPA 6010

Analysis Results:

SCL No.	8399	8400	8401	8402	8403	8404	8405	8406	8407	8408	8409	8410	8411
Field No.	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1	SCCD LR-1
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Silver	<22	<25	<23	<24	<24	<40	<25	<24	<5	<15	<5	<22	<24
Arsenic	<22	<25	<23	44	<24	<40	<25	<24	<5	<15	20	<43	50
Barium	170	220	140	180	120	150	<25	<24	40	50	100	120	50
Beryllium	<5	<5	<5	<5	<5	<8	<5	<5	<1	<3	<1	<5	<5
Cadmium	<22	<25	<23	<24	<24	<40	<25	<24	<5	<15	<5	<22	<24
Cobalt	<22	<25	<23	<24	<24	<40	<25	<24	<5	<15	<10	<22	<24
Chromium	1500	1200	660	1700	220	<40	<25	<24	10	550	140	150	<24
Copper	770	2100	400	5600	1400	37%*	66%*	66%*	620	3300	7800	2100	5500
Molybdenum	<44	<25	<23	<24	<24	<40	<25	<24	<5	<15	20	<22	<24
Nickel	70	130	35	150	120	170	<50	60	10	270	390	260	310
Lead	490	620	230	1200	320	900	810	350	66	160	210	140	200
Antimony	<44	<25	<23	<48	<24	<40	<25	<24	<5	<15	<5	<22	<24
Selenium	<44	<25	<23	<24	<24	<40	<25	<24	<5	<15	<5	<22	<24
Thallium	<22	<25	<23	<24	<24	<40	<25	<24	<5	<15	<5	<22	<24
Vanadium	<44	34	36	<48	<24	<40	<25	<24	<5	<15	25	<22	<24
Zinc	480	1300	370	1800	510	2800	2500	2500	230	320	600	580	230
pH	6.8	6.5	7.3	6.4	6.9	NA	8.9	9.2	6.7	5.0	5.1	7.2	4.4

* Duplicate samples run and values confirmed by AA
NA insufficient sample submitted to the laboratory. None left for pH analysis.

Analyst's Signature

Gloria R Cruz 01-11-90
Gloria Cruz Date

Supervisor's Signature

Janice Wakakuwa 1/11/90.
Janice Wakakuwa Date

QC Report for Metal Analysis
Southern California Laboratory - Hazardous Materials Unit
1449 Temple Street, Los Angeles, Ca. 90026
Telephone 213-620-3376

To : David Rasmussen Sample Set SCL Nos. :8339 to 8411

Matrix : soil Date of Analysis : 1990

Level of Spike : 1000 mcg Standard Lot Number: SPEX

Duplicate done on : 8404 Spike done on : 8400

Sample Location: Southern California Chemical

Analytical Procedures Used: Digestion HMU 323 Analysis : EPA 6010

	Reagent Blank	Method Std % Rec	Reference Material Expected Range	Found	Duplicate % RPD	Matrix Spike % Rec
I.D. of the Reference material			RM M 1088			
Units	mg/kg	%	mg/kg	mg/kg	%	%
Silver	<0.5	52	230 - 510	460		70
Arsenic	<0.5	91	1340 - 1900	1600		96
Barium	<0.5	99	2500 - 4200	3400	6.4	92
Beryllium	<0.1	102	43 - 62	54		98
Cadmium	<0.5	103	330 - 440	410		95
Cobalt	<0.5	98	2900 - 3900	3400		93
Chromium	<0.5	96	1700 - 2700	2200		71
Copper	<0.5	82	1800 - 2400	1900	5.2	72
Molybdenum	<0.5		2100 - 3400	2800		
Nickel	<0.5	105	1300 - 2200	1800	<1	86
Lead	<0.5	96	730 - 1200	1100	6.4	80
Antimony	<0.5		240 - 440	420		
Selenium	<0.5	96	210 - 410	410		97
Thallium	<0.5	106	510 - 930	805		98
Vanadium	<0.5	100	2400 - 3800	3400		94
Zinc	<0.5	106	2300 - 3200	2800	3.5	74
Acceptable Range		80% - 120%			< 20%	75%-125%

Poor spike recoveries for silver, chromium and copper may be due to non-homogeneity in the sample matrices.

Analyst's Signature

Gloria R Cruz 01-11-90
Gloria Cruz Date

Supervisors Signature

Janice Wakakuwa 1/11/90.
Janice Wakakuwa Date

SCCDLR1	~~53'~~ East from Lab	21'N SB6	
SCCDLR2	SB5	12:37	12/14
SCCDLR3	SB4	12:41	"
SCCDLR4	- Back Stop West end of Tracks + Even with telephone pole to the west		"
SCCDLR5	~~Even~~ Even with yellow scrap metal returns (south) and directly north of telephone pole (57') (North of Tank F9)	12:53	"
SCCDLR6	1:15	black powder out of Area between copper ~~SD~~ oxide dryer & copper sulfide Area	
SCCDLR7	1:28	Inside copper oxide bagging area	
SCCDLR8	1:35	ouside of copper oxide bagging area	

~~Out~~ 12/14/87

SCCDLR 9 ~~SCC Gutter Drive~~ 1:54 pm
(Liquid) Gutter – Main Entrance –
Off-site – SCC Facility

SCCDLR 10 SCC – Offsite – Culvert Entrance 12/14/87
Near SCC Railroad Siding – ~~Near~~ East
~~South of. Rain Water Tank #3~~ Railroad Gate

SCCDLR 11 SCC – offsite – culvert (Drain Pipe)
Exit In Ditch across
Railroad Tracks (Exit of SCCDLR10)

SCCDLR 12 Drainage Ditch – 2:33 pm
Uphill from Drain
Pipe Exit – offsite –
across from west SCC
railroad gate

SCCDLR 13 Across from center of Rain Water Tank
#3 – offsite – Between two
main railroad 2:40 pm
tracks

State of California-Health and Welfare Agency — Department of Health Services

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

All applicable items must be completed

1. HML No. To SCG189 — 2. Page 1 of 1

3. Collector/Address David Rasmussen, 1405 N. San Fernando Blvd. Burbank 91504 — 4. Phone 818/567-3124

5. Priority ☐ a. Authorized by 3

6. Date Sampled August 16, 1990 — 7. Time Sampled 11:30 Hours

8. Codes (fill in all applicable codes)

a. STC	3040
b. Region	3
c. TPC	
d. INDEX	7040
e. PCA	340000
f. SITE	
g. County	037

9. Activity ☑ Enf ☐ Surv ☐ Site Mit ☐ Permitting ☐ Ait Tech ☐ Other

10. SAMPLING LOCATION — a. EPA ID No. CAD008148025

b. Site Southern California Chemical Co.

c. Address 8851 Dice Road, Santa Fe Springs (Number / Street / City / Zip)

11. SAMPLES

a. ID	b. Collector's No.	c. HML No.	Container d. Type	Container e. Type	Container f. Size	g. Field Information
A.	SCCJF1	9111	Soil	Glass	500ml	Underground tank excavation - NW corner
B.	SCCJF2	9112	Soil			NE corner
C.	SCCJF3	9113	Soil			SE corner
D.	SCCJF4	9114	Soil			Large pile NE corner
E.	SCCJF5	9115	Soil			West side
F.	SCCJF6	9116	Soil			West parking lot 9 feet west of fence 4 Pts. 148 FTW
G.	SCCJF7	9117	Soil			
H.						

FIELD

12. ANALYSIS REQUESTED

a. ☐ pH		f. ☑ PCB	A-G	k. ☐ Ext. Org (Screeng)	
b. ☑ Metal Scan	A-G	g. ☐ VOA		l. ☐ Chlorinated Pesticides	
c. ☐ Metals (Spec)		h. ☐ PAH		m. ☐ Organo-P Pesticides	
d. ☐ W.E.T.		i. ☐ Phenols		n. ☑ TAH	A-E
		j. ☐ Carba-mates		o. ☐	

13. CHAIN OF CUSTODY

	Signature	Name/Title	Inclusive Dates
a.	David Rasmussen	David Rasmussen Haz Mat Spc.	8/16/90 - 8/24/90
b.			/ / - / /
c.			/ / - / /
d.			/ / - / /

14. SPECIAL REMARKS

15. RECEIVED BY [signature] a. Title PHC III b. Date 8/24/90

16. SAMPLE ALLOCATION a. ☐ HML-Berkeley b. ☐ HML-SC c. ☐ AIHL d. ☐ Contract b. Date

17. ANALYSIS REQUESTED

LAB

Southern California Laboratory Section - Hazardous Materials Unit
1449 W Temple Street Los Angeles Ca. 90026
Telephone 213-620-3376

To : David Rasmussen SCL No: 9111 to 9117

Sample Location: Southern California Chemical Co. Date of Report: 9-26-90

8851 Dice Road, Santa Fe Springs.

Analytical Procedures Used: Digesyion : HMU 3.24 Analysis : EPA 6010

Analysis Results:

SCL No.	9111	9112	9113	9114	9115	9116	9117
Field No.	SCCJF-1	SCCJF-2	SCCJF-3	SCCJF-4	SCCJF-5	SCCJF-6	SCCJF-7
Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Silver	<50	<50	<50	<50	<50	<50	<50
Arsenic	<50	<50	<50	<50	<50	<50	<50
Barium	150	100	150	150	100	100	100
Beryllium	<10	<10	<10	<10	<10	<10	<10
Cadmium	<50	<50	<50	<50	<50	<50	<50
Cobalt	<50	<50	<50	<50	<50	<50	<50
Chromium	100	450	200	150	600	1500	600
Copper	1300	800	6600	700	1500	21,000	7300
Molybdenum	<50	<50	<50	<50	<50	200	60
Nickel	<50	50	100	<50	150	500	200
Lead	250	100	350	500	1200	1600	350
Antimony	<50	<50	<50	<50	<50	<50	<50
Selenium	<50	<50	<50	<50	<50	<50	<50
Thallium	<50	<50	<50	<50	<50	<50	<50
Vanadium	50	<50	<50	<50	<50	<50	<50
Zinc	350	2000	900	500	1600	2400	900

Analyst's Signature Supervisor's Signature

Jay Patel 9-27-90 Janice Wakakuwa

Jay Patel Date Janice Wakakuwa Date

QC Summary for Metal Analysis

Southern California Laboratory - Hazardous Materials Unit
1449 Temple Street, Los Angeles, Ca. 90026
Telephone 213-620-3376

To : David Rasmussen
Matrix : Soils
Level of Spike : 10 ppm
Duplicate done on : 9112
Sample Location: Southern California Chemical Co,
8851 Dice Rd, Santa Fe Springs.

Sample Set SCL Nos : 9111 to 9117 & 9129
Date of Analysis : 9-21-90
Standard Lot Number: SP0590DK100
Spike done on : 9112

Analytical Procedures Used: Digestion HMU 323 Analysis : EPA 6010

	Reagent Blank	Method Std % Rec	Reference Material Expected Range	Found Dup A	Found Dup B	% RPD Ref Material	% RPD SMPL DUP	Matrix Spike % Rec
I.D. of the Reference material: RMM 1088								
Units	mg/L	%	mg/kg	mg/kg	mg/kg	%	%	%
Silver	<1	103	360-505	460	476	3	*	95
Arsenic	<1	96	1550-1890	1715	1698	1	*	91
Barium	<1	102	2820-4480	4052	4008	1	2	95
Beryllium	<0.2	108	41-96	79	78	1	*	104
Cadmium	<1	103	406-490	460	454	1	*	96
Cobalt	<1	102	3280-3990	3669	3642	0.7	*	97
Chromium	<1	101	2110-2550	2425	2299	5	6	97
Copper	<1	102	1900-2760	2776	2291	19	4	91
Molybdenum	<1	100	2970-3600	3211	3226	0.5	*	102
Nickel	<1	104	1660-2010	1846	1843	0.2	1	93
Lead	<1	103	900-1150	1005	1001	0.4	7	93
Antimony	<1	101	310-548	483	470	3	*	95
Selenium	<1	97	380-500	459	422	8	*	90
Thallium	<1	97	580-1060	792	779	2	*	82
Vanadium	<1	99	3060-3680	3443	3410	1	*	106
Zinc	<1	107	2570-3280	2987	2952	1	2	88
Acceptable Range		80%-120%				< 20%		75%-125%

*Element was not found in the sample at detectable level.

Analyst's Signature

Jay Patel 9-27-90

Jay Patel Date

Supervisor's Signature

Janice Wakakuwa Date

QC REPORT
Southern California Laboratory Section -Hazardous Material Unit
1449 Temple Street Los Angeles Ca 90026
Telephone 213-620-3376

To :David Rasmussen Sample Set SCL Nos. : 8649-8660

Matrix : Soil Date of Analysis : 3/30/90

Level of Spike : 20 ppm Standard Lot Number:SP0190DK-100

Duplicate done on :8650 Spike done on : 8650

Sample Location: Southern California Chemical
8851 Dice Road,Santa Fe Springs

Analytical Procedures Used: Digestion HMU 323 Analysis : EPA 6010 & EPA 7210

	Reagent Blank	Method Std % Rec	Reference Material Expected Range	Found	Duplicate % RPD	Matrix Spike % Rec
I.D. of the Reference material			RM M 1088			
Units	mg/kg	%	mg/kg	mg/kg	%	%
Silver	<.5	58	230 - 510	247	*	30
Arsenic	<.5	96	1340 - 1900	1636	*	92
Barium	<.5	104	2500 - 4200	3717	9	88
Beryllium	<.2	105	43 - 62	54	*	95
Cadmium	<.5	109	330 - 440	426	*	90
Cobalt	<.5	106	2900 - 3900	3624	*	95
Chromium	<.5	103	1700 - 2700	2257	12	81
Copper	<.5	98	1800 - 2400	2260	2	96
Molybdenum	<.5	102	2100 - 3400	3070	*	92
Nickel	<.5	103	1300 - 2200	1763	4	106
Lead	<.5	100	730 - 1200	1046	2	84
Antimony	<.5	103	240 - 440	664	*	94
Selenium	<.5	104	210 - 410	424	*	93
Thallium	<.5	100	510 - 930	756	*	89
Vanadium	<.5	105	2400 - 3800	3385	*	97
Zinc	<.5	108	2300 - 3200	2880	2	91
Acceptable Range		80% - 120%			< 20%	75%-125%

Analyst's Signature Supervisors Signature

P S Hira 4/4/90 Janice Wakakuwa 4/6/90

Prem S Hira Date Janice Wakakuwa Date

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LABORATORY REPORT
Southern California Laboratory Section - Hazardous Materials Unit
1449 Temple Street, Los Angeles Ca 90026
Telephone 620-3376

To : David Rasmussen SCL No. : 8649-8660

Sampling No. :See below Date of Report: 4/4/90

Sample Location: Southern California Chemical
8851 Dice Road, Santa Fe Springs
Analytical Procedures Used: HMU 323 FOR DIGESTION
EPA 6010, EPA 7210 FOR ANALYSIS

Analysis Results:

SCL No.	8649	8650	8651	8652	8653	8654	8655	8656
Field No.	SCCDM 1	SCCDM 2	SCCDM 3	SCCDM 4	SCCDM 5	SCCDM 6	SCCDM 7	SCCDM8
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/l	mg/kg	mg/kg	mg/kg
Silver	<25	<25	<25	<25	<5	<25	<25	<25
Arsenic	<25	<25	<25	<25	<5	<25	<25	<25
Barium	100	140	130	160	<5	<25	<25	<25
Beryllium	<10	<10	<10	<10	<2	<2	<2	<2
Cadmium	<25	<25	<25	<25	<5	<25	<25	<25
Cobalt	<25	<25	<25	<25	<5	<25	<25	<25
Chromium	1600	1100	1100	1300	<5	<25	<25	<25
Copper	1300	880	1200	2100	300,000	8,800	860,000	880000
Molybdenum	<25	<25	25	<25	<5	<25	<25	<25
Nickel	140	140	140	110	<5	<25	<25	<25
Lead	470	320	340	520	1,800	100	<25	110
Antimony	<25	<25	<25	<25	<5	<25	<25	<25
Selenium	<25	<25	<25	<25	<5	<25	<25	<25
Thallium	<25	<25	<25	<25	<5	<25	<25	<25
Vanadium	<25	<25	<25	<25	<5	<25	<25	<25
Zinc	700	450	430	780	640	210	2100	3600

Analyst's Signature

Prem S Hira 4/4/90
Date

Supervisor's Signature

Janice Wakakuwa 4/6/90
Date

LABORATORY REPORT

Southern California Laboratory Section- Hazardous Material Unit
1449 Temple Street Los Angeles Ca 90026
Telephone 620-3376

To : David Rasmussen SCL No. : 8649-8660

Sampling No. :See below Date of Report: 4/4/90

Sample Location: Southern California Chemical
8851 Dice Road, Santa Fe Springs
Analytical Procedures Used: HMU 323 FOR DIGESTION
EPA 6010, EPA 7210 FOR ANALYSIS

Analysis Results:

SCL No.	8657	8658	8659	8660				
Field No.	SCCDM 9	SCCDM10	SCCDM11	SCCDM12				
Units	mg/kg	mg/l	mg/kg	mg/kg				
Silver	<25	<25	70	<25				
Arsenic	<25	<25	<25	<25				
Barium	<25	<25	200	68				
Beryllium	<10	<10	<10	<10				
Cadmium	<25	<25	<25	<25				
Cobalt	<25	<25	<25	<25				
Chromium	<25	<25	1900	24				
Copper	960,000	81	8100	600				
Molybdenum	<25	<25	310	<25				
Nickel	<25	<25	560	<25				
Lead	260	17	46,000	110				
Antimony	<25	<25	490	<25				
Selenium	<25	<25	<25	<25				
Thallium	<25	<25	<25	<25				
Vanadium	<25	<25	<25	<25				
Zinc	2200	81	28,000	270				

Analyst's Signature P S Hira 4/4/90
Prem S Hira Date

Supervisor's Signature Janice Wakakuwa 4/6/90
Janice Wakakuwa Date

LABORATORY REPORT

Southern California Laboratory Section - Hazardous Materials Unit
1449 Temple Street Los Angeles Ca. 90026
Telephone 213-620-3376

To	:David Rasmussen	SCL No.	: 8649-8660
Sampling No	: see below	Date	: 4/4/90

Sample Location :Southern California Chemical

8851-Dice Road, Santa Fe Springs

Analytical Procedures Used : EPA 9045

Analysis Results

SCL NO.	CLLECTORS NO.	PH-UNITS
8649	SCCDM-1	6.9
8650	SCCDM-2	7.2
8651	SCCDM-3	7.1
8652	SCCDM-4	7.0
8659	SCCDM-11	6.2

Analyst's Signatures:

PS Hira — Prem S Hira — 4/4/90 Date

Supervising Chemist's Signature:

Janice Wakakuwa — Janice Wakakuwa — 4/6/90. Date